UV/EB CURABLE RESINS

Product Guide - Americas

allnex
The Coating Resins Company

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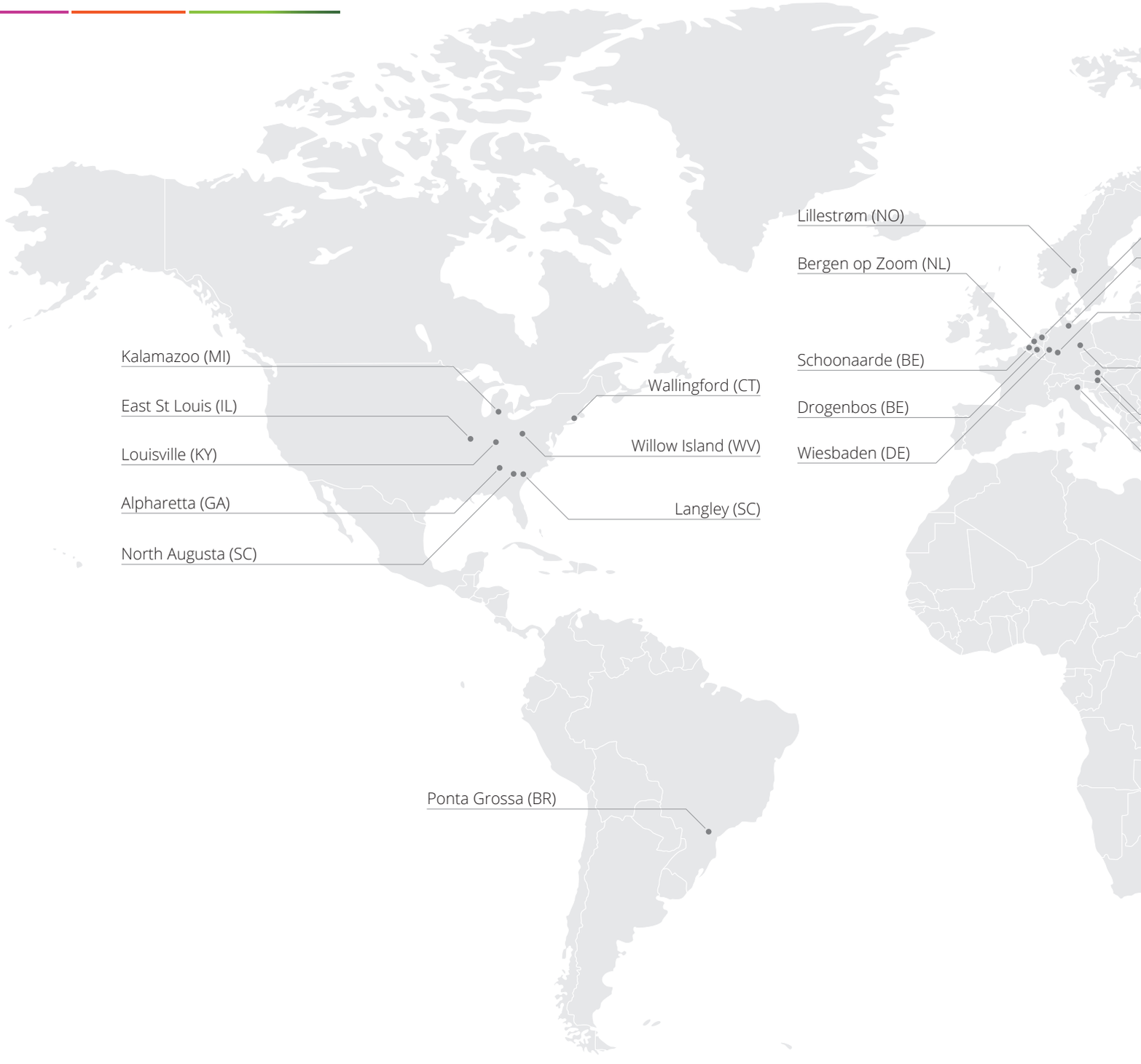
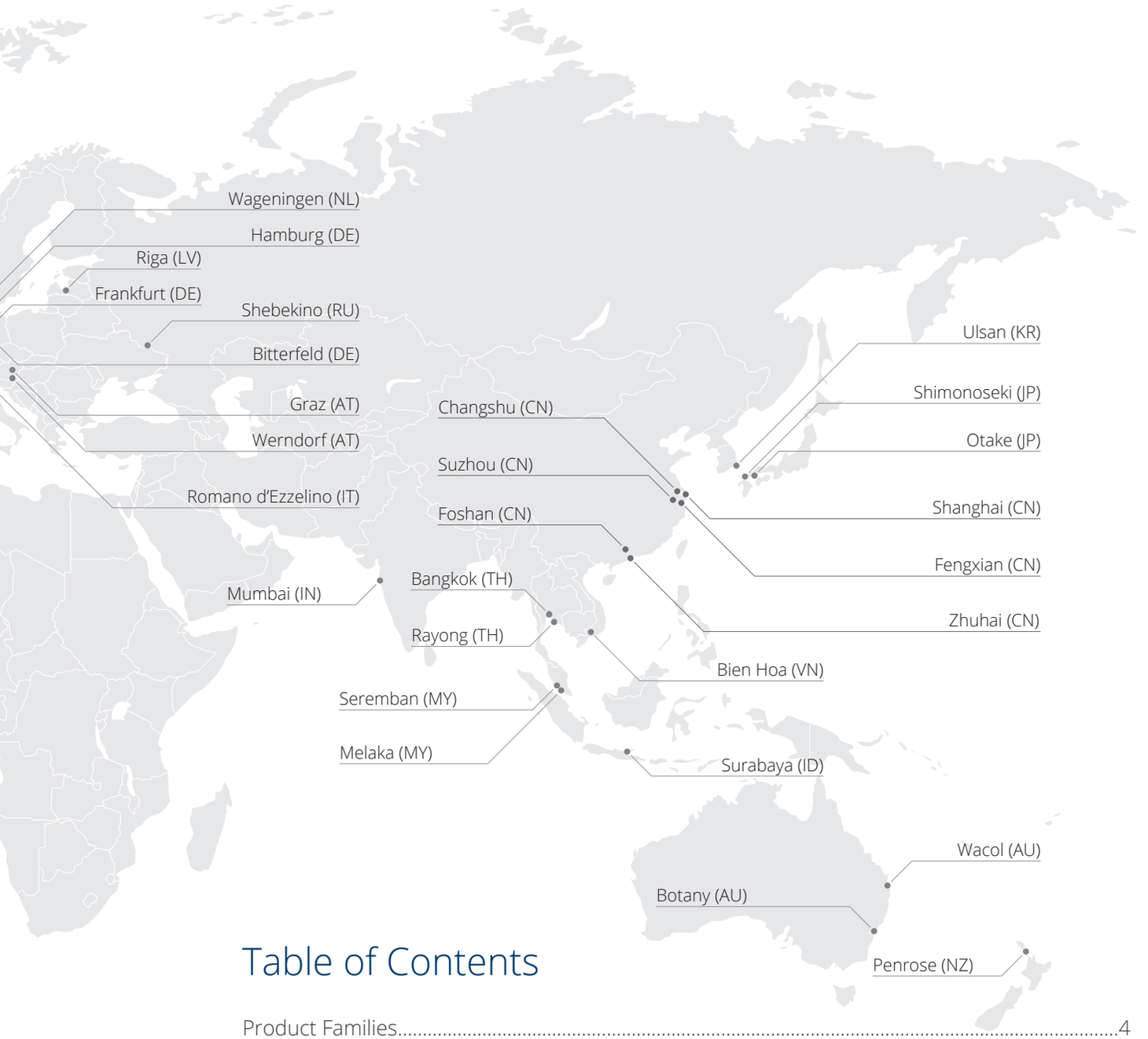


Facts & Figures

- Global company with over €2.1 billion in sales
- Broad technology portfolio: liquid coating resins, energy curable resins, powder coating resins, crosslinkers and additives, composites and construction materials
- Approximately 4000 employees
- Customers in more than 100 countries
- 32 manufacturing facilities
- 23 research and technology centers
- 5 joint ventures
- Extensive range of solutions for key coating segments: automotive, industrial, packaging coating and inks, protective, industrial plastics and specialty architectural

With manufacturing, R&D and technical facilities located throughout Europe, North America, Asia Pacific and Latin America, allnex offers global and reliable supply of resins and additives combined with local, responsive customer support.



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Product Families

UCECOAT® Waterborne UV Resins	These waterborne resins have low viscosities without the use of diluting acrylates and good physical properties after crosslinking. Several are physically dry after water evaporation.
EBECRYL® LEO Resins	LEO (Low Extractables and Odor) resins are specifically formulated to provide a significant reduction in odor release and potential migration for producing inks and coatings for food and pharmaceutical packaging.
EBECRYL Urethane Acrylates	Urethane acrylates impart toughness and flexibility. Aliphatic types are non-yellowing and can provide outstanding exterior durability
EBECRYL Polyether/Polyester Acrylates & Diluted Polyesters	Polyester acrylates are used in a wide range of applications including flexographic and lithographic inks and coatings for paper and wood. Some specialty polyester oligomers provide good adhesion to various substrates.
EBECRYL Acrylic Acrylate & Polymer/Diluent Blends	Acrylic acrylates can provide improved adhesion and are resistant to yellowing. Polymeric resins in monomer can provide adhesion to difficult substrates with low shrinkage and better film formation.
EBECRYL Epoxy Acrylates	Epoxy acrylates are used in formulations requiring superior chemical resistance, hardness and fast cure.
Diluting Acrylates	Mono, di, tri and higher functional acrylate diluents reduce the viscosity of oligomers and can contribute important physical properties to cured formulations.
EBECRYL Additives	Several additives are designed to assist with adhesion or enhance the wetting, flow or slip characteristics of coatings. All are co-polymerizable.
EBECRYL Photoinitiators	Photoinitiators absorb UV light and start the polymerization. Product types are hydrogen abstraction and amine synergists.

Product Index

UCECOAT® Waterborne UV Resins

Product	Description • Key Features & Performance	Typical Properties[1]						
		Appearance	Viscosity, cP at 25°C	Solids Content, %	Particle size, nm	pH	MFFT, °C	Density, g/ml at 25°C
Waterborne UV Dispersions								
UCECOAT 2501	Versatile UV PUD for Wood & Furniture • Very good cost/performance balance • Physically dry/tack free before UV cure • Excellent compatibility with WB acrylics • Excellent dispersion stability • Very good water release	Milky white liquid	<200	40	<125	7-8.5	-	1.1
UCECOAT 2801 Sn	Acrylated PUD for WB UV Inkjet • Very low viscosity • Non-physically dry/non-tack free before UV cure • Good water resolubility before cure • GHS label free • Very good UV reactivity	Translucent bluish to white dispersion	16	37	90	6.4-7	-	1.05
UCECOAT 2802	Acrylated PUD for WB UV Inkjet • BPA free • Non-physically dry before UV cure • Good water resolubility before cure • GHS label free • Very good UV reactivity	Translucent bluish dispersion	<1000	38	80	6.5-7.0	-	-
UCECOAT 2803	Acrylated PUD for WB UV Inkjet • Excellent colloidal stability • Non-physically dry before UV cure • Viscosity adjustable by adding water in any proportion • Re-soluble/re-dispersible before cure • Very good UV reactivity • GHS label free	Translucent bluish dispersion	200	39-42	-	6.5-8.5	-	1.15
UCECOAT 2804 Sn	UV/LED Curable Dispersion for Inkjet Printing • Low migration potential • Very high reactivity in Hg UV and UV LED • Good adhesion to plastic substrates • Tack free and water redispersible after water evaporation but before cure	White liquid	75	35	<100	~7.5	<10	1.1
UCECOAT 2805 Sn	High Performance Dispersion for Inkjet Printing • Low migration potential • Low mean particle size, outstanding colloidal stability • Good elongation, flexibility • Tack free and water redispersible after water evaporation but before cure	Slightly translucent	100	35	20	~8.0	<10	1.05
UCECOAT 2806 Sn	High Performance Dispersion for Inkjet Printing • Low migration potential • Very low viscosity • Low mean particle size, outstanding colloidal stability • Easily water redispersible after water evaporation but before cure	Translucent to white liquid	10	35	75	~6.7	<5	1.0
UCECOAT 7230 Sn	Acrylated Polyurethane Dispersion • High hardness & scratch resistance • Good adhesion on plastics such as PC, ABS • Non-physically dry/non-tack free before UV cure • High gloss • Good stain & chemical resistance • Good substrate wetting • Good compatibility with other waterborne resins	Translucent to white liquid	<200	45	<100	7-8	-	1.05
UCECOAT 7510	Acrylated Polyurethane Dispersion • Low yellowing on cure • Excellent cost/performance balance • Excellent dispersion stability • Excellent drying properties • Nearly tack free after physical drying • High hardness • Good chemical and stain resistance	Translucent to white liquid	<200	40	<150	6.5-8	-	1.1

[1] Not a specification

Sn Does not contain intentionally added organic tin compounds

Product	Description • Key Features & Performance	Typical Properties[1] Appearance	Viscosity, cP at 25°C	Solids Content, %	Particle size, nm	pH	MFFT, °C	Density, g/ml at 25°C
Waterborne UV Dispersions								
UCECOAT® 7620	Acrylated Polyurethane Dispersion • Good colloidal stability and substrate wetting • Good compatibility with other waterborne resins • Tack free after water evaporation before UV curing • Very high hardness • High gloss & body richness • Excellent abrasion & chemical resistance	Milky-white liquid	<200	~40	<100	7-8.5	-	~1.1
UCECOAT 7630	Acrylated Polyurethane Dispersion • Physically dry/tack free before UV cure • Very high reactivity in clear and pigmented systems • Good intercoat adhesion without sanding • Excellent stain resistance • Good compatibility and easy to formulate	Translucent liquid	<200	41	<150	7-8.5	-	1.0
UCECOAT 7655	Acrylated Polyurethane Dispersion • Low viscosity • Physically dry/tack free before UV cure • Superior hardness and scratch resistance • Excellent stain & chemical resistance • Excellent reactivity in clear and pigmented coatings • Optimized colloidal stability	Translucent to white liquid	47	35	64	7-8.5	<0	1.02
UCECOAT 7674	Acrylated Polyurethane Dispersion • Low viscosity • Outstanding wetting of wood • Excellent adhesion & appearance • Excellent stain & chemical resistance • Optimized colloidal stability	Translucent to white liquid	38	39	97	6.4-7.8	<0	1.05
UCECOAT 7689	Acrylated Polyurethane Dispersion • Low viscosity • Physically dry/tack free before UV cure • Excellent exterior durability • High flexibility • Good chemical resistance	Translucent to white liquid	117	35	42	7-8.5	0	1.0
UCECOAT 7700 Sn	Acrylated Polyurethane Dispersion • Low viscosity • Physically dry/tack free before UV cure • Very high reactivity in clear and pigmented systems • Excellent stability • Good compatibility, easy to formulate	Translucent liquid	32	35	83	7-8.5	6	1.0
UCECOAT 7717	Acrylated Polyurethane Dispersion • Excellent adhesion and wood grain enhancement • Low tack but not physically dry after water evaporation • Good compatibility with stains (dyes and pigments)	Translucent to milky dispersion	56	40	87	6-7.5	-	1.1
UCECOAT 7733	Acrylated Polyurethane Dispersion • Excellent colloidal stability • Good compatibility and easy to formulate • Tack-free behavior after physical drying before UV curing • Outstanding hardness and scratch resistance • Excellent stain and solvent resistance	Translucent to white liquid	<200	~38	<125	7.0-8.5	6	1
UCECOAT 7788	Acrylated Polyurethane Dispersion • Versatile resin with optimized cost/performance level • Balance of elasticity, hardness and toughness • Chemical and stain resistance • Nearly tack-free after physical drying	White emulsion	219	40	87	6.5-8.5	-	1.1

Product	Description • Key Features & Performance	Typical Properties[1] Appearance	Viscosity, cP at 25°C	Solids Content, %	Particle size, nm	pH	MFFT, °C	Density, g/ml at 25°C
Waterborne UV Dispersions								
UCECOAT 7856	Acrylated Polyurethane Dispersion • High gloss and distinctness of image (DOI) • High clarity and low yellowing • High solids with a low viscosity • Stenomer-free composition	Translucent to white liquid	<500	~45	<100	6.5-7.5	<0	1.1
UCECOAT 7891	Acrylated Polyurethane Dispersion • Excellent appearance in matte coatings • Superior stability of matte formulations • Excellent solvent and chemical resistance • Tack-free after water evaporation	Opaque liquid	<200	32	<125	6-8.5	~0	1.1
Waterborne UV Solutions								
UCECOAT 6560	Aliphatic Urethane Acrylate Solution • Excellent adhesion on wood • Excellent wood wetting • High flexibility • Non-yellowing	Clear to cloudy liquid	4500 (25°C)	50	-	7-8	-	1
UCECOAT 6570	Waterborne Aliphatic Urethane Acrylate • Low colour • High viscosity • Good water- and solvent resistance • Fast curing • Low MeHQ level	Clear to cloudy liquid	6000 (60°C)	95	-	6.0-8.5	-	1.1

[1] Not a specification

Does not contain intentionally added organic tin compounds

EBECRYL® LEO (Low Extractable and Odor) Resins

Product	Description • Key Features & Performance	Typical Properties[1]							
		Functionality	Viscosity, cP	Acid Value , mg KOH/g (Residual AA, ppm)	Residual solvent, ppm	Weight per Amine	Color, Gardner (Pt-Co)	Molecular weight, g/mol	Density, g/ml at 25°C
LEO Resins									
EBECRYL LEO 10101	Self-Curing Acrylate Resin • Requires no added photoinitiator • Moderate viscosity	2	4000 (25°C)	(<200)	<10	-	-	1000	1.10
EBECRYL LEO 10103	Self-Curing Acrylate Resin • Requires no added photoinitiator • Low migration offset inks	3	6000 (25°C)	(<200)	<10	-	-	-	1.10
EBECRYL LEO 10501 Sn	Trifunctional Diluting Acrylate • High cure response • Good flexibility	3	73 (25°C)	(93)	2.9	-	(32)	470	1.10
EBECRYL LEO 10502	Polymeric Tetrafunctional Acrylate • High cure response • Low viscosity • Good flexibility • High gloss	4	158 (25°C)	1.9 (134)	1.4	-	2	750	1.15
EBECRYL LEO 10551	Amine Modified Polyether Acrylate • Very high cure response • Low viscosity • Good flexibility • High gloss	2.5	71 (25°C)	-	-	1079	0.3	500	1.09
EBECRYL LEO 10552	Amine Modified Polyether Acrylate • Very high cure response • Good flexibility • High gloss	3.5	545 (25°C)	-	-	1438	0.5	1000	1.12
EBECRYL LEO 10553	Amine Modified Polymeric Tetrafunctional Acrylate • Partially based on renewable resources • Good pigment wetting • Good reactivity • Excellent printability	3.4	213 (25°C)	-	-	2004	0.3	780	1.12
EBECRYL LEO 10801	Hexafunctional polyester acrylate • High reactivity • Very good pigment wetting • Very good lithographic behavior in UV offset inks	6	49684 (25°C)	10	-	-	dark	1500	1.08

(1) Not a specification

Sn Does not contain intentionally added organic tin compounds

Made with a minimum of 10% biobased material

EBECRYL® Urethane Acrylates

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Diluent	Viscosity, cP	Color, Gardner (Pt-Co), [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Aliphatic Urethane Acrylates										
EBECRYL 225 Sn	Aliphatic Urethane Acrylate • High functionality resin for hardcoats • Outstanding hardness • Exceptional scratch and abrasion resistance • Excellent steel wool (0000) scratch resistance	10	-	75500 (25°C) 1750 (60°C)	(42)	-	2100	0.8	-	1.19
EBECRYL 230	Aliphatic Urethane Diacrylate • High molecular weight • Soft • Very flexible • Low Tg	2	-	44014 (25°C) 3150 (60°C)	(16)	-	150	83	-48	1.08
EBECRYL 231	Aliphatic Urethane Diacrylate • Light color • Low viscosity • Improved flexibility and toughness • Reduced yellowing	2	MMA 20%	1427 (25°C)	(8)	-	-	-	-	1.06
EBECRYL 242	Aliphatic Urethane Diacrylate • Excellent flexibility • Good adhesion to metal • Good corrosion resistance	2	IBOA 30%	21093 (25°C) 1850 (60°C)	0.2	-	4045	186	46	1.1
EBECRYL 248 Sn	Aliphatic Urethane Diacrylate • Good flexibility and toughness, • Excellent abrasion resistance • Good water, thermal and electrical resistance • Non-yellowing	2	HDDA 10%	~8000 (60°C)	0.2	-	3700	60	-	1.12
EBECRYL 264	Aliphatic Urethane Triacrylate • Toughness • Very good abrasion resistance • Good stain resistance • Flexible	3	HDDA 15%	47384 (25°C) 1850 (60°C)	0.4	-	4200	37	42	1.12
EBECRYL 265	Aliphatic Urethane Triacrylate • Toughness • Very good abrasion resistance • Good stain resistance • Flexible	3	TPGDA 25%	36486 (25°C) 1530 (60°C)	0.3	-	4500	44	38	1.13
EBECRYL 270[2]	Aliphatic Urethane Diacrylate • Good flexibility • Relatively soft • Adhesion	2	EB 145 <2%	132500 (25°C) 3084 (60°C)	0.2	-	1200	87	-27	1.1
EBECRYL 284	Aliphatic Urethane Diacrylate • Excellent exterior durability • Tough • Flexible	2	HDDA 12%	64250 (25°C) 2270 (60°C)	0.2	-	5900	58	50	1.18
EBECRYL 285	Aliphatic Urethane Diacrylate • Good flexibility and toughness • Good exterior durability • Non-yellowing	2	TPGDA 25%	23000 (25°C)	2	-	5950	56	42	1.13
EBECRYL 286 Sn	Aliphatic Urethane Triacrylate • Excellent abrasion resistance and stainresistance • Good flexibility and toughness • Good adhesion • Non-yellowing	2	TPGDA 25%	23200 (25°C)	0.3	-	6000	56	42	1.13

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Diluent	Viscosity, cP	Color, Gardner (Pt-Co), [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Aliphatic Urethane Acrylates										
EBECRYL 294/25	Aliphatic Urethane Triacrylate • Excellent abrasion resistance • Outstanding stain resistance • Superior toughness	3	HDDA 25%	260000 (25°C) 7253 (60°C)	0.2	-	9230	1.6	42	1.11
EBECRYL 1271 Sn	Aliphatic Urethane Diacrylate • Light color • Good flexibility • Good adhesion • Non-yellowing • Exterior durability • Abrasion resistance	2	-	99050 (25°C) 3560 (60°C)	(<75)	-	2020	54	19	1.04
EBECRYL 1290[2]	Aliphatic Urethane Hexaacrylate • Good reactivity • Excellent hardness • Outstanding scratch resistance	6	-	85000 (25°C) 2040 (60°C)	0.2	-	6700	2	-	1.19
EBECRYL 1291 Sn	Aliphatic Urethane Hexaacrylate • Excellent scratch and abrasion resistance • High gloss • High surface hardness • Non-yellowing	6	-	1900 (60°C)	(75)		1070	1	80	1.16
EBECRYL 4100[2]	Aliphatic Urethane Triacrylate • Good adhesion to various plastics • Very tough and flexible • Exterior durability	3	-	6800 (23°C)	(98)	0.9	2175	27	22	1.13
EBECRYL 4201 Sn	Aliphatic Urethane Tetraacrylate • Good chemical and mechanical resistance properties • Outstanding abrasion resistance • Good UV reactivity	4	-	~8000 (23°C)	(<150)	<2	870	15	12	1.13
EBECRYL 4220	Aliphatic Urethane Triacrylate • Good chemical and mechanical resistance properties • Low yellowing	3	TPGDA 25%	~26000 (23°C)	(<150)	1	-	-	-	1.13
EBECRYL 4265	Aliphatic Urethane Acrylate • Very low inherent viscosity • Good chemical and wear resistance	3.4	-	~800 (23°C)	(<200)	1	-	-	-	1.12
EBECRYL 4491	Aliphatic Urethane Diacrylate • Very high flexibility and elongation • Provides elastomeric cured films	2	IBOMA 20%	60000-120000 (23°C)	(<200)	2	725	250	-	1.13
EBECRYL 4513	Aliphatic Urethane Triacrylate • Tough but flexible • Chemical and wear resistant • Non-yellowing	3	-	~25000 (23°C)	(100)	1	1015	30	-	1.15
EBECRYL 4587	Aliphatic Urethane Acrylate • Water emulsifiable aliphatic urethane acrylate • Good chemical and wear resistance	3.4	-	~1500 (23°C)	[1]	5	-	-	-	1.13
EBECRYL 4654	Aliphatic Urethane Triacrylate • Solid resin supplied at 60% solids in n-butyl acetate • Physically dry after solvent evaporation • Good chemical and mechanical resistance properties • High resistance to yellowing, exterior durability	3	-	920 (25°C)	(21)	5	-	-	-	1.02

[1] Not a specification
[2] Version available that does not contain intentionally added organic tin compounds

Sn Does not contain intentionally added organic tin compounds
Made with a minimum of 10% biobased material

EBECRYL® Urethane Acrylates

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Diluent	Viscosity, cP	Color, Gardner (Pt-Co), [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Aliphatic Urethane Acrylates										
EBECRYL 4666	Aliphatic Allophanate Urethane Tetraacrylate • High UV reactivity • Good abrasion and scratch resistance • Hardness and weatherability	4	-	~60000 (23°C)	(100)	-	9425	4	65	1.18
EBECRYL 4680	Aliphatic Urethane Tetraacrylate • Good UV reactivity • High abrasion resistance • Good chemical resistance	4	HDDA 20%	~29000 (23°C)	(150)	1	2900	2	-	1.11
EBECRYL 4683	Aliphatic Urethane Acrylate • Good adhesion • Abrasion resistance • Chemical resistance	2.4	IBOA 35%	~50000 (23°C)	(100)	-	9860	4	-	1.10
EBECRYL 4685	Aliphatic Urethane Acrylate • Excellent weatherability • High abrasion resistance and surface hardness • Good chemical resistance • Low yellowing	-	TMPTA (20%)	4500 (60°C)	(150)	1	7000	4	-	1.12
EBECRYL 4738	Aliphatic Allophanate Urethane Triacrylate • High UV reactivity • Good abrasion and scratch resistance • Hardness and weatherability	3	-	~40000 (23°C)	(<200)	0.2	5800	3	80	1.15
EBECRYL 4740	Aliphatic Allophanate Urethane Triacrylate • High UV reactivity • Low viscosity • High resistance to yellowing	3	-	~8000 (23°C)	(<300)	0.2	3190	17	30	1.14
EBECRYL 4833	Aliphatic Urethane Diacrylate • Good adhesion to various plastics • Very tough and flexible • Exterior durability	2	N-vinyl-2-pyrrolidone 10%	110000 (25°C) 2817 (60°C)	0.4	-	7800	120	47	1.11
EBECRYL 4858	Aliphatic Urethane Diacrylate • Low intrinsic viscosity • Abrasion, chemical and impact resistance • Flexibility • Toughness • Exterior durability	2	-	7170 (25°C)	0.4	-	5700	3.5	54	1.14
EBECRYL 4859	Aliphatic Urethane Dimethacrylate • Produces hard polymers without high crosslinking • High Tg • Low intrinsic viscosity • Tough and impact resistant • Exterior durability	2	-	9300 (25°C)	(14)	-	2250	0.6	124	1.14
EBECRYL 4883	Aliphatic Urethane Diacrylate • Good flexibility • Abrasion resistance • Exterior durability • Adhesion	2	TPGDA 15%	161000 (25°C) 4904 (60°C)	0.3	-	2900	83	4	1.1
EBECRYL 4900	Aliphatic Urethane Diacrylate • Low viscosity • Tack free after solvent evaporation • High hardness • Excellent cure response	2	butyl acetate (40%)	~1500 (25°C)	<1	-	-	-	-	1.05

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Diluent	Viscosity, cP	Color, Gardner (Pt-Co), [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Aliphatic Urethane Acrylates										
EBECRYL 5129	Aliphatic Urethane Hexaacrylate • Fast cure response • Scratch and abrasion resistance • Improved flexibility • Chemical resistance	6	-	15780 (25°C) 733 (60°C)	0.3	-	9100	4	30	1.18
EBECRYL 8209	Aliphatic Urethane Acrylate • Dual functionality, reactive with NCO • Primary hydroxyl groups • Good scratch and abrasion resistance • Excellent reactivity	3.9	-	4000 (25°C)	< 2	80-105	-	-	-	1.12
EBECRYL 8210[2]	Aliphatic Urethane Acrylate • Dual functionality, reactive with NCO • Primary hydroxyl groups • Good scratch and abrasion resistance • Excellent reactivity	3.5	-	3746 (25°C)	0.3	-	6400	2	68	-
EBECRYL 8301-R	Aliphatic Urethane Hexaacrylate • Good reactivity • Excellent hardness • Outstanding scratch resistance • Exterior durability	6	-	24600 (25°C) 251 (65.5°C)	0.2	-	7750	3	-	1.16
EBECRYL 8314	Aliphatic Urethane Tetracrylate • Outstanding toughness • Excellent abrasion resistance & weatherability • Thermoformable after cure (small to medium draws) • Good adhesion, hardness, and flexibility • Non-yellowing	4	IBOA (8%) & HPMA (12%)	14000 (25°C)	<1	-	6000	110	90	1.13
EBECRYL 8315	Aliphatic Urethane Tetraacrylate • Excellent toughness & abrasion resistance • Thermoformable after cure • Outstanding weatherability • Non-yellowing • Self healing properties of minor scratches	4	HPMA (20%)	9200 (25°C)	<2	-	5000	100	90	1.13
EBECRYL 8402[2]	Aliphatic Urethane Diacrylate • Relatively low viscosity • Good adhesion • Outstanding exterior durability	2	-	14830 (25°C) 507 (60°C)	0.2	-	3350	50	14	1.12
EBECRYL 8405	Aliphatic Urethane Tetraacrylate • Outstanding exterior durability • Excellent abrasion resistance • Good flexibility	4	HDDA 20%	85000 (25°C) 4428 (60°C)	0.2	-	4000	29	30	1.13
EBECRYL 8409	Aliphatic Urethane Diacrylate • Relatively low viscosity • Excellent adhesion to difficult surfaces • Outstanding exterior durability	2	-	12500 (25°C)	< 2	-	-	-	-	1.16
EBECRYL 8411	Aliphatic Urethane Diacrylate • Outstanding extensibility and flexibility • Useful in screen inks • Good abrasion resistance • Good exterior durability	2	IBOA 20%	149500 (25°C) 7779 (60°C)	0.3	-	1170	320	-18	1.13

[1] Not a specification
[2] Version available that does not contain intentionally added organic tin compounds

Does not contain intentionally added organic tin compounds

EBECRYL® Urethane Acrylates

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Diluent	Viscosity, cP	Color, Gardner (Pt-Co), [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Aliphatic Urethane Acrylates										
EBECRYL 8413	Aliphatic Urethane Diacrylate • Excellent extensibility, 550% elongation at break • Good milling properties • Well suited for thermoformable coatings and inks • Low shrinkage • Good adhesion	2	IBOA ~33%	32800 (60°C)	-	-	2200	550	-	1.04
EBECRYL 8501	Aliphatic Urethane Acrylate • Automotive refinish and general metal • Excellent surface cure with low intensity UV • Good wetting of inert and reactive fillers • Excellent adhesion to automotive substrates • Good flexibility and toughness • Low shrinkage upon cure	3	IBOA 15%	36400 (25°C) 1400 (60°C)	0.8	-	4200	28	-	1.1
EBECRYL 8602	Aliphatic Urethane Acrylate • Excellent surface hardness and chemical resistance • Excellent weatherability compared to traditional hardcoats • High gloss • Low haze after abrasion resistance	9	-	86000 (25°C) 3068 (60°C)	(32)	-	5400	1	-	1.16
EBECRYL 8605	Aliphatic Urethane Tetramethacrylate • Excellent exterior durability • Toughness • Good surface hardness	4	HDDA 15%	24000 (60°C)	<2	-	9000	4	90	1.13
EBECRYL 8606	Aliphatic Urethane Tetracrylate • Outstanding toughness • Excellent abrasion resistance & weatherability • Thermoformable after cure (small to medium draws) • Flexibility with good adhesion • Non-yellowing	4	-	4500 (60°C)	<1	-	5000	70	-	1.13
EBECRYL 8702	Aliphatic Urethane Hexaacrylate • Good toughness • Excellent abrasion and stain resistance • Impact resistance • Non-yellowing • Good exterior durability	6	-	364000 (25°C) 5800 (60°C)	0.4	-	4700	10	28	1.13
EBECRYL 8800	Aliphatic Urethane Acrylate • Regulation friendly for tin, heavy metals, and quinones • Excellent abrasion resistance • Good toughness and flexibility • Exterior durability	2.5	EOEOEA (10%)	9000 (65°C)	< 2	-	4148	21.8	48	1.05
EBECRYL 8800-20R	Aliphatic Urethane Acrylate • Abrasion resistance • Toughness • Exterior durability	2.5	TPGDA 20% EOEOEA 8%	44588 (25°C) 1722 (65.5°C)	0.2	-	3400	45	59	1.01
EBECRYL 8804[2]	Aliphatic Urethane Diacrylate • Extremely tough • Flexible • Abrasion resistance	2	-	3200000 (25°C) 14649 (65.5°C)	0.4	-	3000	103	24	1.14

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Diluent	Viscosity, cP	Color, Gardner (Pt-Co), [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Aliphatic Urethane Acrylates										
EBECRYL 8807[2]	Aliphatic Urethane Diacrylate • Very good surface reactivity • Good flexibility • Tough • Useful for UV LED, UVA and low intensity UV cure	2	-	258600 (25°C) 7476 (60°C)	0.2	-	1950	54	32	1.05
EBECRYL 8809 Sn	Aliphatic Urethane Diacrylate • Light color • Excellent exterior durability • Excellent toughness • Non-yellowing	2	EBECRYL 10501 5%	1870000 (25°C) 16000 (60°C)	<1	-	5000	24	67	1.18
EBECRYL 8810 Sn	Aliphatic Urethane Diacrylate • Regulation friendly for tin, heavy metals, and quinones • Good abrasion resistance • Excellent flexibility and toughness • Non-yellowing	2	-	30000 (60°C)	<1	-	3279	48	54	1.16
EBECRYL 8812 Sn	Aliphatic Urethane Acrylate • Regulation friendly for tin, heavy metals, and quinones • Excellent abrasion resistance • Good toughness and flexibility • Exterior durability	2.5	EOEOEA (10%)	5000-15000 (65.5°C)	1	-	-	-	-	1.05
EBECRYL 8894	Aliphatic Urethane Acrylate • Excellent humidity resistance • Excellent toughness • Good abrasion resistance • Non-yellowing	4	Butyl acetate 20%	65000 (25°C)	<1	-	4061	37	60	1.07
EBECRYL 8896	Aliphatic Urethane Acrylate • Rubbery feel • High flexibility • Good abrasion resistance • Suitable for haptic coatings/in-mold decoration	3	Butyl acetate 25%	10000 (25°C)	<1	-	479	50	-26	1.06

[1] Not a specification
[2] Version available that does not contain intentionally added organic tin compounds

Sn Does not contain intentionally added organic tin compounds

EBECRYL® Urethane Acrylates

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality, Acrylate (NCO)	Diluent	Viscosity, cP	Color, Gardner (Pt-Co)	NCO, %	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Isocyanate Functional Urethane Acrylates										
EBECRYL® 4150	Aliphatic Urethane Acrylate • Isocyanate functional • Dual cure 2-component systems • 1-component systems with improved adhesion	1 (2)	-	~10000 (23°C)	(<150)	~13	-	-	-	1.18
EBECRYL 4155	Aliphatic Urethane Acrylate • Isocyante functionality • Dual cure 2-component systems • 1-component system with improved adhesion	-	-	~5500 (25°C)	(<100)	~9	-	-	-	1.1
EBECRYL 4250 Sn	Aliphatic Urethane Acrylate • Isocyanate functional • Dual cure 2-component systems • 1-component systems with improved adhesion	3.4 (1.4)	-	~2000 (23°C)	(<100)	~5	-	-	-	1.10
EBECRYL 4396	Aliphatic Urethane Acrylate • Isocyanate functional • Dual cure 2-component systems • 1-component systems with improved adhesion	0.8 (2.2)	-	~16000 (23°C)	(<150)	~7.5	-	-	-	1.10
EBECRYL 4397	Aliphatic Urethane Acrylate • Isocyanate functional • Dual cure 2-component systems • 1-component systems with improved adhesion	1 (3)	-	~11000 (25°C)	(<150)	~6.7	-	-	-	1.10
EBECRYL 4510 Sn	Aliphatic Urethane Acrylate • Isocyanate functional • Dual cure 2-component systems • 1-component systems with improved adhesion	1.5 (1.5)	Butyl Acetate ~10%	~20000 (23°C)	(<100)	~7	-	-	-	1.16
EBECRYL 4765 Sn	Aliphatic Urethane Acrylate • Isocyanate functional • Dual cure 2-component systems • 1-component systems with improved adhesion	2 (2.5)	Ethyl Acetate ~45%	~175 (23°C)	(<100)	~4.5	-	-	-	1.05
EBECRYL 4950	Aliphatic Urethane Diacrylate • Low viscosity • Excellent cure response • Excellent stain and chemical resistance • Good scratch resistance	3	butyl acetate (20%)	~1700 (25°C)	<100	6.2	-	-	-	1.1

(1) Not a specification
(2) Version available that does not contain intentionally added organic tin compounds

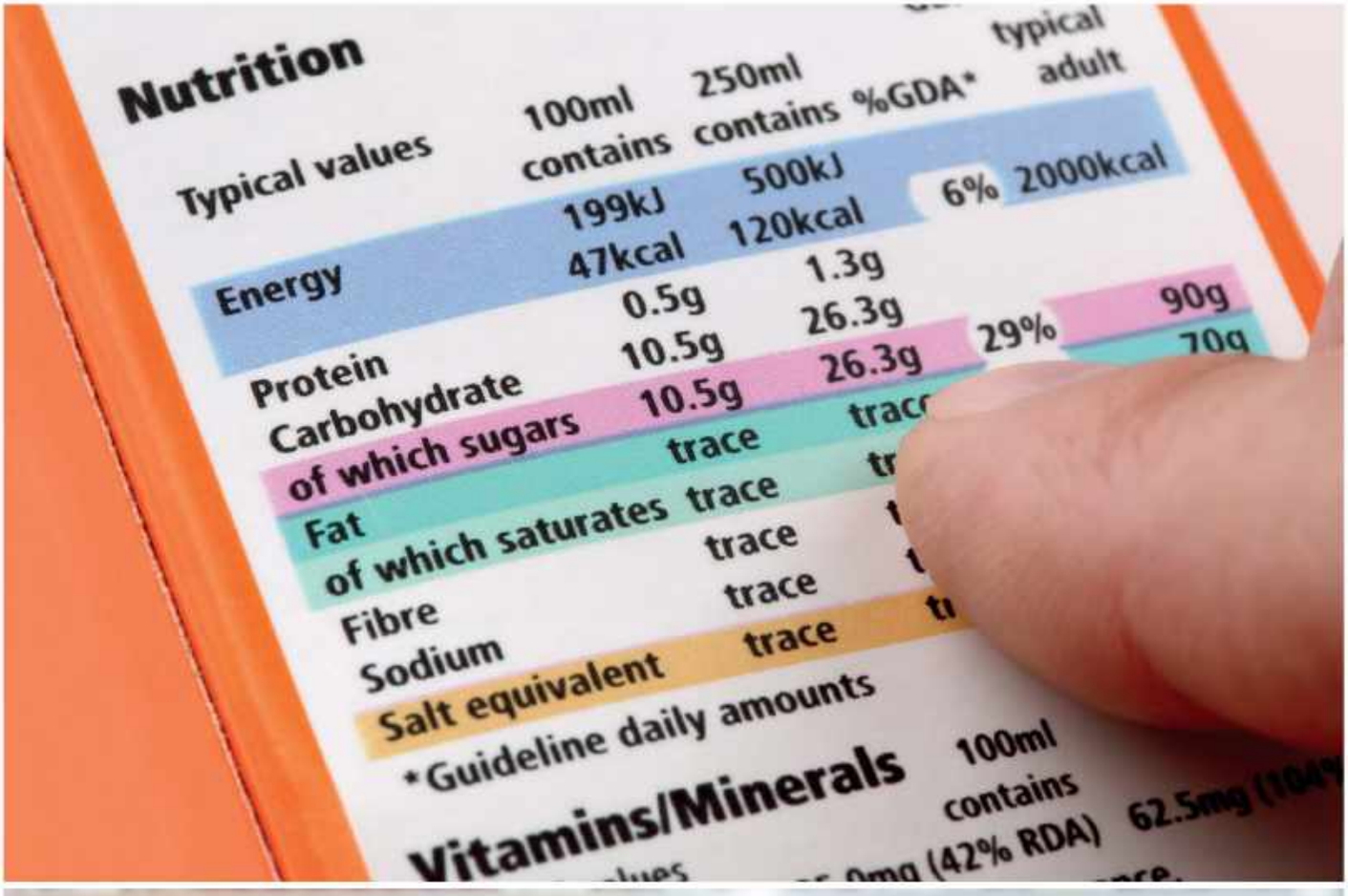
Sn Does not contain intentionally added organic tin compounds

EBECRYL® Urethane Acrylates

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Diluent	Viscosity, cP	Color, Gardner (Pt-Co)	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Aromatic Urethane Acrylates										
EBECRYL 210	Aromatic Urethane Diacrylate • Low odor • Adhesion to various substrates • Good flexibility • Light color	2	-	3600-4600 (60°C)	2	-	2218	64	-19	1.11
EBECRYL 220[2]	Aromatic Urethane Hexaacrylate • High reactivity • Outstanding hardness • Excellent scratch resistance • Chemical resistance	6	-	28485 (25°C) 660 (60°C)	0.3	-	8000	3	49	1.22
EBECRYL 2221 Sn	Aromatic Urethane Hexaacrylate • Contains no pentaerythritol acrylate • High reactivity • High hardness and scratch resistance • Good solvent resistance	6	-	21000 (25°C)	<2	-	-	-	-	1.18
EBECRYL 4501 Sn	Aromatic Urethane Tetraacrylate • Good chemical and mechanical resistance properties • Outstanding abrasion resistance • Good UV reactivity	4	-	~6000 (23°C)	(<300)	<2	-	-	-	1.15
EBECRYL 4827	Aromatic Urethane Diacrylate • Flexibility • Impact resistance • Adhesion	2	-	238000 (25°C) 4241 (60°C)	0.2	-	900	78	-6	1.1
EBECRYL 4849	Aromatic Urethane Diacrylate • Very good abrasion resistance • Toughness • Flexibility	2	HDDA 15%	74170 (25°C) 3435 (60°C)	0.6	-	2700	51	29	1.14

[1] Not a specification
[2] Version available that does not contain intentionally added organic tin compounds

Sn Does not contain intentionally added organic tin compounds


Nutrition
Typical values
100ml contains
250ml contains
%GDA*
typical adult
Energy
199kJ 47kcal
500kJ 120kcal
6% 2000kcal
Protein
0.5g
1.3g
Carbohydrate
10.5g
26.3g
29%
90g
of which sugars
10.5g
26.3g
70g
Fat
trace
of which saturates
trace
Fibre
trace
Sodium
trace
Salt equivalent
trace
*Guideline daily amounts
Vitamins/Minerals
100ml contains
62.5mg (104%
0mg (42% RDA)

EBECRYL® Polyether/Polyester Acrylates & Diluted Polyesters

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Viscosity, cP	Color, Gardner (Pt-Co) [Iodine]	Acid Value, mg KOH/g	Weight per Amine	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Polyether/Polyester Acrylates & Diluted Polyesters										
EBECRYL 80	Amine Modified Polyether Tetraacrylate • Outstanding reactivity • Moderate viscosity • High gloss • Good chemical resistance	4	2822 (25°C)	(53)	-	920	6800	7	50	1.04
EBECRYL 81	Amine Modified Polyether Acrylate • Good reactivity • Very low viscosity • High gloss	2.5	92 (25°C)	0.5	-	1079	790	8	-18	1.08
EBECRYL 83	Amine Modified Polyether Acrylate • Very good reactivity • Low viscosity • High gloss • Chemical resistance	3.5	515 (25°C)	0.5	-	1368	2000	13	6	1.08
EBECRYL 85	Amine Modified Polyether Acrylate • Low viscosity • High reactivity • Chemical resistance • Low residual odor	3.6	150 (25°C)	0.3	-	1403	-	-	-	1.12
EBECRYL 416	Diluted Chlorinated Polyester • 40% TMPTA • BPA free • Good adhesion • Fast cure response • Good adhesion to metals, plastics and paper	-	±1800 (60°C)	<3	<15	-	-	-	-	-
EBECRYL 417	Diluted Chlorinated Polyester • 40% PPTTA • BPA free • Good adhesion • Fast cure response • Good adhesion to metals, plastics and paper	-	±2000 (60°C)	<2	<15	-	-	-	-	-
EBECRYL 418	Diluted Chlorinated Polyester • 40% OTA-480 • BPA free • Good adhesion • Fast cure response • Good adhesion to metals, plastics and paper	-	±1800 (60°C)	<3	<15	-	-	-	-	-
EBECRYL 441	Modified Chlorinated Polyester • 40% TMPTA • BPA free • Medium to good pigment wetting • High Reactivity/Cure speed • Good adhesion	-	1900 (60°C)	< 2	-	-	-	-	-	1.14
EBECRYL 444	Diluted Chlorinated Polyester • 40% OTA-480 • Good adhesion • Fast UV cure response • Good lithographic behavior • BPA and Sn free	3	1500 (60°C)	<3	<25	-	-	-	-	1.26
EBECRYL 445	Diluted Chlorinated Polyester • 40% TMPTA • Good adhesion • Fast UV cure response • Good lithographic behavior • BPA and Sn free	3	85600 (25°C) 1499 (60°C)	1.2	19.4	-	2800	5	37	1.26

[1] Not a specification
[2] Produced with materials derived from Bisphenol-A

Made with a minimum of 10% biobased material

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Viscosity, cP	Color, Gardner (Pt-Co) [Iodine]	Acid Value, mg KOH/g	Weight per Amine	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Polyether/Polyester Acrylates & Diluted Polyesters										
EBECRYL 450	Fatty Acid Modified Polyester Hexaacrylate • Good pigment wetting • Good reactivity • Good lithographic behavior	6	8278 (25°C) 420 (60°C)	-	11.8	-	4300	4	17	1.12
EBECRYL 452	Polyester Tetraacrylate • Excellent pigment wetting properties • Low viscosity • Good cure response	4	769 (25°C)	-	7	-	-	-	-	1.11
EBECRYL 524	Diluted Acidic Polyester • 30% HDDA • Good adhesion • Moderate flexibility	2	61234 (25°C) 2000 (60°C)	(45)	33.9	-	1000	30	-	1.22
EBECRYL 546	Polyester Acrylate • 40% TMPTA • Light color • Chlorine free • Very good pigment wetting • Good ink water balance • Good adhesion-scratch compromise	-	~350000 (25°C) ~5000 (60°C)	~1.5	<10	-	-	-	-	1.1
EBECRYL 571	Diluted Polyester Oligomer • Developed for heat shrink sleeve inks • Excellent adhesion to shrink PVC, PET-G, SBS and PLA • Excellent wrinkle resistance • 40% DPGDA • Shrink and contour without discoloration	2	9170 (25°C)	1	5.2	-	1160	20	44	1.14
EBECRYL 657	Polyester Tetraacrylate • Good pigment wetting • Excellent lithographic behavior • Good anti-misting properties	4	103500 (25°C) 3585 (60°C)	-	12.6	-	4300	23	33	1.03
EBECRYL 809	Modified Polyester Acrylate • Moderate viscosity • Good flexibility • Surface hardness • Toughness	3.5	36000 (25°C) 1276 (60°C)	0.6	7.4	-	3500	18	54	1.14
EBECRYL 810	Polyester Tetraacrylate • Low viscosity • Hardness • Chemical resistance • Adhesion	4	453 (25°C)	0.5	12.5	-	6000	6	31	1.09
EBECRYL 812[2]	Polyester Acrylate • Pigment grind vehicle for flexo inks • Outstanding color development • Good adhesion to plastics and papers	3.5	9320 (25°C) 340 (60°C)	1.5	8	-	5700	2	72	1.14
EBECRYL 820	Polyester Hexaacrylate • Low viscosity • Excellent pigment wetting properties • Good cure response	6	580 (25°C)	7	4	-	-	-	-	1.16
EBECRYL 830	Polyester Hexacrylate • High abrasion resistance • Good hardness and solvent resistance • Light color • Fast curing • Low odor	6	+50000 (25°C)	<3	max 30	-	11170	4	-	1.18
EBECRYL 838	Polyester Hexaacrylate • Hardness • Abrasion/scratch resistance • Chemical resistance	6	50300 (25°C) 990 (65°C)	0.1	24	-	12500	5	60	1.18

EBECRYL® Polyether/Polyester Acrylates & Diluted Polyesters

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Viscosity, cP	Color, Gardner (Pt-Co) [Iodine]	Acid Value, mg KOH/g	Weight per Amine	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Polyether/Polyester Acrylates & Diluted Polyesters										
EBECRYL 846	Modified Polyester Acrylate • Excellent reactivity • Good water balance • Good printability	4	35000-55000 (25°C)	-	10	-	-	-	-	1.14
EBECRYL 854	Polyester Triacrylate • Recommended for parquet floor and furniture • Excellent adhesion • Good abrasion resistance	3	~40000 (25°C)	<2	<5	-	3335	20	55	1.19
EBECRYL 856	Hybrid Polyester Acrylate • Moderate viscosity • Good reactivity	2.5	~3250 (25°C)	2-3	-	-	2901	1	99	1.15
EBECRYL 859[2]	High Reactivity Polyester Acrylate • Developed for high speed UV, HUV, UV LED, and EB cured offset lithographic inks • Excellent pigment wetting including carbon black • Excellent ink water balance	6	36000 (25°C) 957 (60°C)	5.5	2.5	-	-	-	-	1.11
EBECRYL 870	Fatty Acid Modified Polyester Hexaacrylate • Rheology suited for lithographic inks • Good pigment wetting • High reactivity • Good solvent resistance	6	43070 (25°C) 2340 (60°C)	-	11.3	-	4500	5	41	1.08
EBECRYL 871[2]	Lithographic Ink Varnish • Excellent pigment wetting • Good water balance • Good reactivity • Low misting • Excellent printability	6	47450 (25°C)	5.5	7.3	-	5100	4	23	1.1
EBECRYL 875	Lithographic Ink Varnish • Wet or dry offset inks to be printed on plastics • Excellent water balance • Excellent adhesion to many plastic substrates • Neither chlorinated nor acidic in nature • Very low misting • Low odor	3	64000 (25°C) 1700 (60°C)	-	0.9	-	4000	1	70	1.14
EBECRYL 876	Polyester Acrylate • BPA free alternative for OPVs • Fast UV/EB cure response • Excellent chemical resistance • High gloss • High surface hardness	2.2	8800 (25°C)	<1	-	-	2900	16	36	1.15
EBECRYL 885	Polyester Triacrylate • Excellent abrasion resistance • High flexibility • Good reactivity • Moderate viscosity	3	35963 (25°C)	0.3	7.6	-	508	44	21	1.19

(1) Not a specification
(2) Produced with materials derived from Bisphenol-A

Made with a minimum of 10% biobased material

Product	Description • Key Features & Performance	Typical Properties[1]								
		Functionality	Viscosity, cP	Color, Gardner (Pt-Co) [Iodine]	Acid Value, mg KOH/g	Weight per Amine	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Polyether/Polyester Acrylates & Diluted Polyesters										
EBECRYL 888	Polyester Acrylate • Good adhesion • Good abrasion resistance • High flexibility • Excellent ink receptivity	3.5	2200-3200 (25°C)	< 1	-	-	-	-	-	1.19
EBECRYL 893	Modified Polyester Acrylate • For UV curable field applied floor coatings • Resistant to yellowing upon cure and aging • Low viscosity • Fast cure • Adhesion, hardness, and scratch resistance • Good chemical and solvent resistance • High gloss	3.5	580 (25°C)	0.4	-	-	1422	2.7	-	1.11
EBECRYL 898	Polyester Tetraacrylate • Provides outstanding matte effect • Low viscosity • Fast cure • Toughness and adhesion • High surface hardness	4	4000 (25°C)	white	<20	-	1247	1.4	65	0.8
EBECRYL 1871	• Hexafunctional polyester acrylate • High reactivity • Very good pigment wetting • Very good lithographic behavior in UV offset inks	6	49000 (25°C)	dark	<15	-	-	-	-	1.08
EBECRYL 1885	Tin Free Polyester Triacrylate • Excellent abrasion resistance • High flexibility • Good reactivity • Moderate viscosity	3	35963 (25°C)	0.3	7.6	-	508	44	21	1.19
EBECRYL 4175	Hard Unsaturated Wax-free Polyester Resin • 25% DPGDA • Medium viscosity • Light color • Primers and coatings for wood	-	16350 (23°C)	[3]	18	-	2480	6	-	1.15
EBECRYL 4381	Unsaturated Polyester Resin • 30% DPGDA • Medium viscosity • Light color • Primers and coatings for wood	-	12000 (23°C)	[3]	14	-	1885	12	-	1.15
EBECRYL 4744	Polyester Triacrylate • Balanced properties suitable for coatings on wood, paper and film • Medium viscosity • Light color	3	~5500 (25°C)	(<300)	<3	-	2465	10	23	1.15
EBECRYL 5781	Bio-based Aliphatic Diacrylate • Low viscosity • High reactivity • High Tg • Low shrinkage • High renewable content (57%)	2	~450 (25°C)	<4	-	-	1740	<1	162	1.26
EBECRYL 5850	Bio-based Aliphatic Diacrylate • Medium viscosity • High reactivity • Excellent balance of hardness and flexibility • High Tg • High renewable content (56%) • Especially effective in UV LED formulations	2	~5000 (25°C)	<5	-	-	3625	1	115	1.28

Sn Does not contain intentionally added organic tin compounds

EBECRYL® Acrylic Acrylates

Product	Description • Key Features & Performance	Typical Properties[1] Acid Value, mg KOH/g	Color, Gardner (Pt-Co)	Epoxy Content, %	Non-volatile matter, %	Viscosity, cP	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Acrylated Acrylic										
EBECRYL 1200	Acrylated Acrylic • High MW resin • 55% solids in butyl acetate • Physically dry after solvent evaporation • Good adhesion, especially for wood • Excellent chemical and stain resistance • OH functionality reactive with polyisocyanates	<10	<2	<0.64	55	3000 (23°C)	1421	0.4	115	1.07
EBECRYL 1205	OH Functional Acrylic Acrylate • High MW resin • ~48% solids in butyl acetate • Physically dry after solvent evaporation • Excellent adhesion; chemical, stain resistance • OH functionality reactive with polyisocyanates • OH value ~75	~2	(~60)	-	~52	1000 (23°C)	-	-	-	1.01

[1] Not a specification

EBECRYL® Polymer/Diluent Blends

Product	Description • Key Features & Performance	Typical Properties[1]							
		Functionality	Diluting Acrylate	Viscosity, cP	Color, Gardner	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Polymer/Diluent Blends									
EBECRYL 303	Diluted Hydrocarbon Polymer • Light color • Low viscosity • Improved adhesion • Good exterior durability	2	HDDA 45%	577 (25°C)	0.2	-	-	-	1.10
EBECRYL 745	Diluted Acrylic Polymer • Excellent substrate adhesion • Intercoat adhesion • Flexibility	2	HDDA 23% TPGDA 23%	22479 (25°C) 1900 (60°C)	1.5	1900	52	30	1.05
EBECRYL 1300	Diluted Acrylic Polymer • Thermoformability • Tack-free state after cure, non-blocking systems • Good temperature resistance • Low shrinkage (1.2%) • Excellent intercoat adhesion • Good adhesion to a variety of untreated plastics	1	IBOA 70%	9858 (25°C)	0.1	-	-	-	1.03
EBECRYL 1710	Diluted Acrylic Polymer • Improved adhesion • Film formation • Exterior durability	2	HDDA 60%	24480 (25°C) 2300 (60°C)	0.5	6400	4	82	1.07

[1] Not a specification

Made with a minimum of 10% biobased material

EBECRYL® Epoxy Acrylates[1]

Product	Description • Key Features & Performance	Typical Properties[2]							
		Functionality	Viscosity, cP	Color, Gardner [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Epoxy Acrylates									
EBECRYL 605	Bisphenol- A Epoxy Diacrylate • 25% TPGDA • Reduced viscosity • Easier handling	2	7617 (25°C) 248 (60°C)	0.6	0.9	8300	7	92	1.17
EBECRYL 605/40	Bisphenol- A Epoxy Diacrylate • 40% TPGDA • Reduced viscosity • Easier handling	2	250 (25°C) 100 (60°C)	0.5	0.6	7400	3	80	1.14
EBECRYL 608	Bisphenol- A Epoxy Diacrylate • 25% OTA-480 • Reduced viscosity • Easier handling	2	26043 (25°C) 655 (60°C)	0.5	0.7	8700	6	83	1.15
EBECRYL 629	Epoxy Acrylate • 28% TMPTA + 6% HEMA • High surface hardness • Light color • Good heat resistance • Good adhesion to metal, particularly copper	2.3	7000-13000 (60°C)	4	6	12600	3	49	1.18
EBECRYL 1606	Bisphenol A Epoxy Diacrylate • Low odor • High gloss • High surface hardness • Good solvent resistance	2	28000 (25°C)	< 1	max 2	-	-	-	1.15
EBECRYL 3200	Low Viscosity Epoxy Acrylate • Handling ease • Flexibility • Pigment wetting	1.6	2235 (25°C)	1.5	0.3	11900	6	48	1.1
EBECRYL 3411	Fatty Acid Modified Epoxy Diacrylate • Flow and leveling • Pigment wetting • Low viscosity • Flexibility	2	40100 (25°C) 807 (60°C)	4.5	1.1	7100	9	52	1.13
EBECRYL 3415	Modified Epoxy Diacrylate • Adhesion to plastic substrates • Good pigment milling properties • Very useful in screen inks • 40% HDDA	1.5	17500 (25°C) 1250 (60°C)	0.7	1.1	6800	3	68	1.1
EBECRYL 3418	Modified Epoxy Diacrylate • Excellent UV/EB cure response • High flexibility • Good chemical resistance • High gloss • Toughness • Excellent adhesion to most types of wood and many plastics	2	17845 (25°C) 540 (60°C)	0.8	-	4067	15	-	1.12
EBECRYL 3500	Modified Epoxy Diacrylate • Increased toughness • Moderate viscosity • Chemical resistance • High gloss	2	60000 (25°C) 1184 (60°C)	2.5	2.5	6500	43	35	1.18

[1] All products in this family contain materials derived from Bisphenol-A except as noted
[2] Not a specification

EBECRYL® Epoxy Acrylates[1]

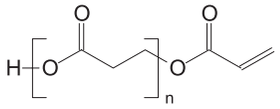
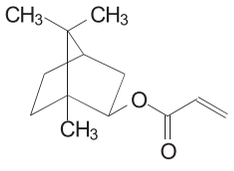
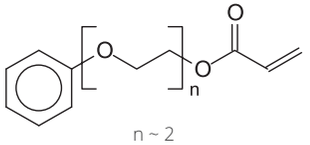
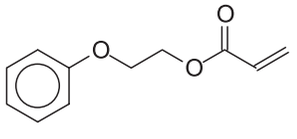
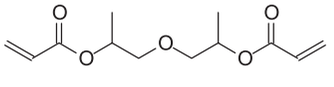
Product	Description • Key Features & Performance	Typical Properties[2]							
		Functionality	Viscosity, cP	Color, Gardner [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Epoxy Acrylates									
EBECRYL 3503	Modified Epoxy Diacrylate • Improved wetting of pigments, matting agents, and substrates • 20% OTA-480 • Light color • Chemical resistance	2	1050 (60°C)	0.6	0.9	10300	3	-	1.16
EBECRYL 3600	Amine Modified Epoxy Diacrylate • Exceptional reactivity • Hardness • High gloss • Chemical resistance	2	232000 (25°C) 1334 (65.5°C)	1.5	0.1	12300	8	59	1.17
EBECRYL 3605	Partial Epoxy Acrylate • High gloss finish • Good solvent resistance • High surface hardness • Good adhesion to metals and other non-porous substrates • Improved flexibility	2	500-800 (65.5°C)	5	1	3800	35	43	1.14
EBECRYL 3700-25R	Bisphenol A Epoxy Diacrylate • 25% TMPTA • Very fast cure response • Low odor • High gloss • Good chemical resistance & surface hardness	2	8000-20000 (25°C)	3	0.75	15900	4	71	1.15
EBECRYL 3700	Bisphenol- A Epoxy Diacrylate • High reactivity • Excellent solvent resistance • High gloss	2	800000 (25°C) 2317 (65.5°C)	2.5	0.2	12000	5	65	1.18
EBECRYL 3701	Modified Bisphenol- A Epoxy Diacrylate • Improved flexibility • Toughness • Increased adhesion • High reactivity	2	1600000 (25°C) 3996 (65.5°C)	3	2.7	11400	7	52	1.19
EBECRYL 3701-20T	Modified Bisphenol- A Epoxy Diacrylate • EBECRYL 3701 with 20% TMPTA • Reduced viscosity • Easier handling	2	89500 (25°C) 925 (65.5°C)	2.5	2.3	14200	7	62	1.18
EBECRYL 3702	Fatty Acid Modified Epoxy Diacrylate • Flow and leveling • Pigment wetting • Increased flexibility	2	495000 (25°C) 2249 (65.5°C)	4	1.1	9500	10	56	1.14
EBECRYL 3703	Amine Modified Epoxy Diacrylate • Exceptional reactivity • Increased flexibility • High gloss • Improved adhesion	2	320000 (25°C) 2117 (65.5°C)	2	2.5	5900	47	57	1.18
EBECRYL 3708	Modified Bisphenol- A Epoxy Diacrylate • Very good flexibility • Impact resistance • Good reactivity	2	190000 (25°C) 3475 (60°C)	1.5	1.7	1094	110	21	1.16

Product	Description • Key Features & Performance	Typical Properties[2]							
		Functionality	Viscosity, cP	Color, Gardner [Iodine]	Acid Value, mg KOH/g	Tensile Strength, psi	Tensile Elongation, %	Tg, °C	Density, g/ml at 25°C
Epoxy Acrylates									
EBECRYL® 3720	Bisphenol- A Epoxy Diacrylate • Standard epoxy diacrylate • Light color • High reactivity • Solvent resistance • High gloss	2	750000 (25°C) 1960 (65.5°C)	0.5	0.6	11000	8	67	1.17
EBECRYL 3720-HD20	Bisphenol- A Epoxy Diacrylate • EBECRYL 3720 with 20% HDDA • Reduced viscosity • Easier handling	2	8203 (25°C) 320 (60°C)	0.5	0.7	9900	7	91	1.14
EBECRYL 3720-TM20	Bisphenol- A Epoxy Diacrylate • EBECRYL 3720 with 20% TMPTA • Reduced viscosity • Easier handling	2	44000 (25°C) 759 (60°C)	0.5	1	9400	6	101	1.18
EBECRYL 3720-TM40	Bisphenol- A Epoxy Diacrylate • EBECRYL 3720 with 40% TMPTA • Reduced viscosity • Easier handling	2	7085 (25°C) 235 (60°C)	0.5	0.8	8300	4	80	1.15
EBECRYL 3720-TP25	Bisphenol- A Epoxy Diacrylate • EBECRYL 3720 with 25% TPGDA • Reduced viscosity • Easier handling	2	10962 (25°C) 315 (60°C)	0.5	0.7	9800	4	96	1.14
EBECRYL 3721	Modified Bisphenol- A Epoxy Diacrylate • Increased toughness and impact resistance • High reactivity • Good adhesion	2	4140 (65.5°C)	1.8	-	9300	3	-	1.14
EBECRYL 3730-TP20	Modified Bisphenol- A Epoxy Diacrylate • Improved wetting • Chemical resistance • High gloss • 20% TPGDA	2	35500 (25°C) 686 (60°C)	1.2	0.3	9800	3	99	1.15
EBECRYL 4266	Modified Aromatic Epoxy Acrylate • Low viscosity • Good wetting of inorganic compounds • Balanced hardness and flexibility	3.5	6500 (23°C)	(<3)	<2	2175	8	15	1.14
EBECRYL 5848	Epoxidized Soya Oil Acrylate • Improved flow, leveling and pigment wetting • Increased adhesion and flexibility • Approximately 62% renewable content	3-4	19000 (25°C)	6	9.7	-	-	-	1.03

(1) All products in this family contain materials derived from Bisphenol-A except as noted
(2) Not a specification

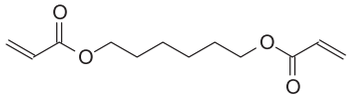
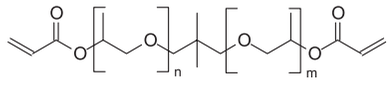
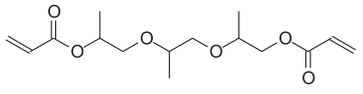
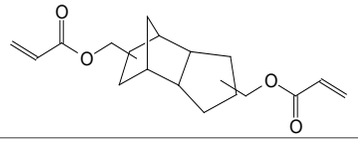
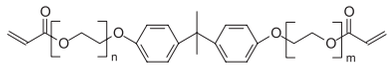
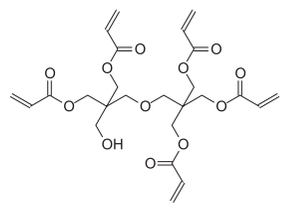
Made with a minimum of 10% biobased material

Diluting Acrylates

Product Monofunctional	Description • Key Features & Performance	Typical Properties[1]					
		Viscosity cP at 25°C	Color, Pt-Co (Gardner)	Water, %	Residual Solvent, % (ppm)	Acid Value, mg KOH/g (Residual AA, %)	Density, g/ml at 25°C
Diluting Acrylates							
β-CEA  average n = 1	ß-Carboxyethyl Acrylate • Predominately acrylic acid dimer • Acrylate and carboxylic acid functionality • Adhesion promoter for glass, metal, paper	73	35	0.81	-	365	1.21
IBOA 	Isobornyl Acrylate • High purity, low color • Flexibility without softening • Increased Tg	9.5	7	0.03	-	(0.02 %)	0.97
EBECRYL 110  n ~ 2	Oxyethylated Phenol Acrylate • Reduced odor • Good diluency	22	(0.5)	-	0.006	0.2	1.12
EBECRYL 113	Aliphatic Acrylate • Low odor • Good pigment wetting • Good reactivity • Increased flexibility • Improved adhesion	120	(0.7)	-	-	0.4	0.97
EBECRYL 114 	2-Phenoxyethyl Acrylate • Low viscosity • Good diluency • Improved adhesion • Beneficial in screen inks	10	24	-	-	0.5	1.10
EBECRYL 117	Hydroxy Functional Monoacrylate • Reactive hydroxyl group; OH value ~160 • Low odor • Good adhesion • Low Tg; increased flexibility	70	<100	-	-	-	1.10
DPGDA 	Dipropylene Glycol Diacrylate • Good diluency • Improved flexibility, adhesion • Reactivity	9.2	36	0.04	0.13	0.2	1.06

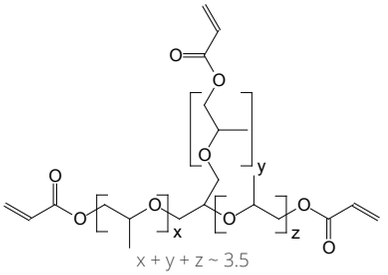
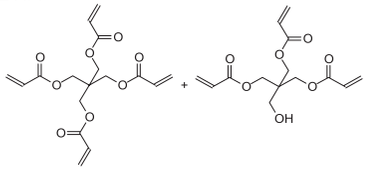
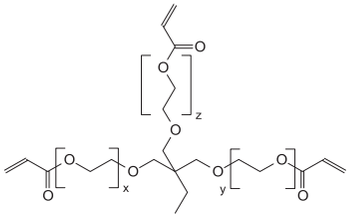
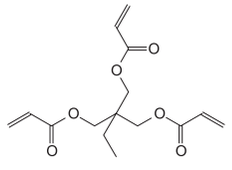
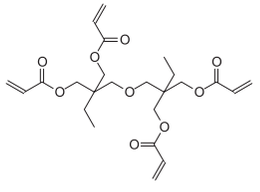
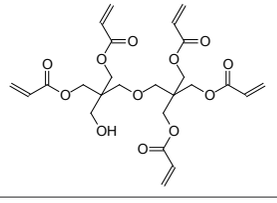
[1] Not a specification

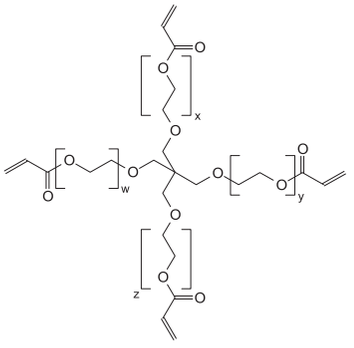
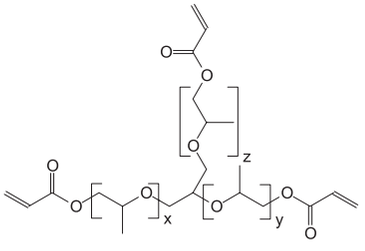
Made with a minimum of 10% biobased material

Product Difunctional	Description • Key Features & Performance	Typical Properties[1]					
		Viscosity cP at 25°C	Color, Pt-Co (Gardner)	Water, %	Residual Solvent, % (ppm)	Acid Value, mg KOH/g	Density, g/ml at 25°C
Diluting Acrylates							
HDDA 	1,6-Hexanediol Diacrylate • Good weatherability • Excellent diluency • Adhesion	6.3	8	0.14	0.05	0.08	1.01
NPG(PO)$_2$DA  n + m ~ 2	Neopentyl Glycol Propoxylate(2) Diacrylate • Increased flexibility • Lower surface tension • Improved adhesion	15.9	48	0.03	0.003	0.07	1.01
TPGDA 	Tripropylene Glycol Diacrylate • Branched alkyl polyether backbone • Combines flexibility, moisture resistance, low viscosity and good reactivity without causing brittleness	11.8	11	0.16	0.03	0.11	1.03
EBECRYL 130 	Tricyclodecanediol Diacrylate • Good adhesion • Low volumetric shrinkage • Good hardness • Increase barrier properties	171	(0.5)	-	-	0.5	1.09
EBECRYL 150  n + m ~ 4	Bisphenol-A Ethoxylate Diacrylate • High reactivity • Hardness • Chemical resistance	1347	(0.5)	-	0.003	2.7	1.14
EBECRYL 151	Grinding Vehicle for UV Inkjet • Produces low viscosity pigment dispersions and inks • Suitable for grinding pigments in a bead mill • Low odor • High reactivity • Good adhesion to treated plastics and coated papers • Cured inks have high gloss, good scratch and solvent resistance	115	(0.8)	-	-	-	1.09
DPHA 	Acrylated Dipentaerythritol • Increased crosslinking • High reactivity • Excellent hardness, scratch resistance • Chemical resistance • Pendant hydroxyl functionality • Mixture of penta- and hexaacrylate	15400	(0.6)	-	0.014	7.3	1.17

[1] Not a specification

Diluting Acrylates

Product Tri & Higher Functional	Description • Key Features & Performance	Typical Properties[1]					
		Viscosity cP at 25°C	Color, Pt-Co (Gardner)	Water, %	Residual Solvent, % (ppm)	Acid Value, mg KOH/g	Density, g/ml at 25°C
Diluting Acrylates							
OTA-480  x + y + z ~ 3.5	Propoxylated Glycerol Triacrylate • Good reactivity • Crosslinking, hardness, chemical resistance without brittleness • Pigment wetting	88	42	0.02	0.01	0.16	10.08
PETIA 	Pentaerythritol Tri-Tetraacrylate • Tetra- to Tri- acrylate ester ratio ~ 1 to 1 • Liquid at normal ambient temperature • High reactivity • Very good hardness, scratch resistance • Pendant hydroxyl functionality	1044	30	-	0.007	6.8	1.18
TMPEOTA  x + y + z ~ 3	Trimethylolpropane Ethoxy Triacrylate • Good diluency • High UV reactivity • Increased flexibility vs. TMPTA	70	40	0.16	0.01	0.1	1.10
TMPTA 	Trimethylolpropane Triacrylate • Increases crosslinking • Imparts hardness • Chemical resistance • Good reactivity	115	35	0.03	0.01	0.3	1.10
EBECRYL 140 	Ditrimethyolpropane Tetraacrylate • High crosslinking • Increased hardness • Good chemical resistance • Improved abrasion/scratch resistance	979	85	-	0.008	5.1	1.08
EBECRYL 895 	Dipentaerythritol Penta/Hexaacrylate • Lower viscosity than standard DPHA • Increased crosslinking • High reactivity • Excellent hardness, scratch resistance • Chemical resistance • Pendant hydroxyl functionality	7602	(0.4)	-	(0.5)	7.3 (58)	1.16

Product Tri & Higher Functional	Description • Key Features & Performance	Typical Properties[1]					
		Viscosity cP at 25°C	Color, Pt-Co (Gardner)	Water, %	Residual Solvent, % (ppm)	Acid Value, mg KOH/g (Residual AA, ppm)	Density, g/ml at 25°C
Diluting Acrylates							
EBECRYL 40	Polyether Tetraacrylate • Good reactivity • Hardness without brittleness • Chemical resistance • Improved abrasion/scratch resistance	148	(0.6)	-	0.002	1.4	1.15
EBECRYL 45	Polyether Tetraacrylate • Low residual odor • Lower potential extractables • Good reactivity • Hardness without brittleness	139	(0.2)	-	(6)	(338 ppm)	1.15
EBECRYL 50  w + x + y + z = 5	Ethoxylated Pentaerythritol Tetraacrylate • Light color • Low viscosity • Good cure response • High surface hardness • Good solvent resistance • Low residual odor • Low impurity profile	175	<100	-	-	-	1.15
EBECRYL 53  x + y + z ~ 3.5	Propoxylated Glycerol Triacrylate • Purified version of OTA-480 • Lower residual odor • Reduced residual acrylic acid • Reduced residual solvent	94	43	0.02	(2)	0.2	1.08
EBECRYL 853	Ethoxylated Trimethylolpropane Triacrylate • Good cure response • Hardness and chemical resistance • Improved flexibility • Low residual odor	~80 (25°C)	(<200)	-	-	-	1.1
EBECRYL TMPTMA	Trimethylolpropane Trimethacrylate • High crosslink density • Lower stabilizer content • Lower shrinkage	50-70 (25°C)	(100)	0.1 max	-	-	1.07

[1] Not a specification

EBECRYL® Additives

Product	Description • Key Features & Performance	Typical Properties[1]				
		Function-ality	Viscosity cP at 25°C	Color, Gardner	Acid Value	Density, g/ml at 25°C
Additives						
Adhesion Promoters						
EBECRYL 168	Acidic Methacrylate • Excellent adhesion promotion on metal • Increased compatibility compared to EBECRYL 170	2	1466	0.5	282	1.29
EBECRYL 170	Acidic Acrylate • Excellent adhesion promotion on metal • Increased reactivity compared to EBECRYL 168	2	3245	3	288	1.33
Flow, Leveling, Wetting						
EBECRYL 350	Silicone Diacrylate • COF reduction, increased slip • Improved substrate wetting • Copolymerizable, non-migratory	2	288	7.5	2.4	1.05
EBECRYL 1360	Silicone Hexaacrylate • COF reduction, increased slip • Improved substrate wetting • Non-migratory • Particularly effective in EB	6	1327	6.5	17	1.11
Increased UV Reactivity						
EBECRYL LED 02	Mercapto Modified Resin • Improves surface cure, especially with lower energy UV LED and UVA light sources • Low viscosity • Compatible with most resin types • Compatible with acidic additives	3	106	-	-	1.14
EBECRYL LED 03	Amine Modified Polyether Acrylate • Low viscosity • Light color • Good surface cure response • Good flexibility • Low odor • Low migration potential	2	~450 (25°C)	<1	-	1.03

[1] Not a specification

EBECRYL® Photoinitiators

Product	Description • Key Features & Performance	Typical Properties[1]					
		Viscosity, cP at 25°C	Color, Gardner	Melting Point, °C	Weight per Amine	Acid Value, mg KOH/g	Density, g/ml at 25°C
Photoinitiators							
Amine Synergists							
EBECRYL P104	Acrylated Amine • Improved stability • Reduced odor • Decreased moisture sensitivity	10	0.7	-	300	-	1.01
EBECRYL P115	Copolymerizable Amine • Improved stability • Reduced odor • Decreased moisture sensitivity	22	0.4	-	223	-	0.99
EBECRYL 7110	Acrylated Amine • Low color • Improved stability • Reduced odor • Decreased moisture sensitivity • Adhesion	1250	0.2	-	404	-	1.1
Hydrogen Abstraction							
EBECRYL P39	Acrylated Benzophenone Derivative • UV coatings and inks with very low residual odor • Low vapor pressure and volatility • Contains 25% EBECRYL LEO 10501	9300	5	-	-	1.8	1.19

[1] Not a specification

Product Selection Guide

Selection Guide - Resins and Diluting Acrylates

The following table provides a comparison of select performance properties for the resin and diluent products. Each product family is assigned a relative ranking for each performance property represented by the numeral just below the column heading. The higher numeral indicates increased performance for that family. The number of bullets in each performance property column represents a relative ranking for that product within its product family. Better performance is indicated by more bullets. To compare the performance of products from different product families, multiply the number of bullets by the numeral.

For example, comparing the reactivity of the epoxy acrylate EBECRYL® 3700 (•••• x 5 = 20) to that of the aliphaticu-rethane acrylate EBECRYL 1290 (••••• x 3 = 15) indicates that EBECRYL 3700 has the superior reactivity.

Note: For the performance category of viscosity, increased performance equals lower viscosity.

For the UCECOAT® resins, the performance ratings are applicable for comparison among these products, but not to the EBECRYL resins and diluting acrylates.

Resins	UV/EB Reactivity	Viscosity	Adhesion	Hardness	Flexibility	Weatherability	Chemical Resistance	Moisture Resistance	Abrasion Resistance	Scratch Resistance
Epoxy Acrylates	5	3	3	4	2	1	5	3	2	3
EBECRYL 605	●●●	●●●●	●●●	●●●	●●	●●	●●●●	●●●	●●	●●●
EBECRYL 605/40	●●●	●●●●●	●●●	●●●	●●	●●	●●●	●●●	●●	●●●
EBECRYL 608	●●●●	●●●	●●●	●●●●	●	●●	●●●●	●●●●	●●●	●●●
EBECRYL 629	●●●●	●●	●●●●	●●●●	●●	●●	●●●	●●●●	●●●●	●●●●
EBECRYL 1606	●●●●	●●●	●●●	●●●●●	●	●●	●●●●●	●●●	●●	●●●
EBECRYL 3200	●●	●●●●●	●●●	●●	●●●	●●●	●●	●●●	●●●	●
EBECRYL 3411	●●●	●●●	●●●	●●●●	●●●	●●	●●●	●●●	●●●	●●
EBECRYL 3415	●●	●●●●	●●●●●	●●	●●	●●	●●●	●●●●	●●●	●●
EBECRYL 3418	●●●	●●●	●●●●	●●	●●●●	●●	●●●	●●●	●●●●	●●
EBECRYL 3500	●●●	●●●	●●●●●	●●●	●●●	●●	●●●	●●●	●●●●●	●●●
EBECRYL 3503	●●●●	●●●●	●●●	●●●●	●	●●	●●●●	●●●	●●	●●●
EBECRYL 3600	●●●●●	●●	●●●●	●●●●●	●	●	●●●●	●●●	●●	●●●●
EBECRYL 3605	●●●●	●●●	●●●	●●●●●	●●●	●	●●●●	●●●	●●●	●●●
EBECRYL 3700	●●●●	●	●●●	●●●●●	●	●	●●●●●	●●●●	●●●	●●●●●
EBECRYL 3700-25R	●●●●	●●●	●●●	●●●●●	●	●●	●●●●●	●●●	●●	●●●
EBECRYL 3701	●●●●	●	●●●●	●●●●	●●●	●●	●●●●	●●●●●	●●●●	●●●
EBECRYL 3701-20T	●●●●	●●	●●●	●●●●	●●	●●	●●●●	●●●●●	●●●	●●●
EBECRYL 3702	●●●	●●	●●●●	●●●	●●●	●●	●●●●	●●●	●●●●	●●
EBECRYL 3703	●●●●●	●●	●●●●	●●●●	●●	●	●●●●	●●●	●●●	●●●
EBECRYL 3708	●●●	●●	●●●●	●●	●●●●●	●●	●●●	●●●	●●●●	●●
EBECRYL 3720	●●●●	●	●●●	●●●●●	●	●	●●●●●	●●●●	●●●	●●●●●
EBECRYL 3720-HD20	●●●	●●●●	●●●	●●●●	●●	●●	●●●●	●●●	●●●	●●●
EBECRYL 3720-TM20	●●●●	●●●	●●●	●●●●●	●	●●	●●●●●	●●●	●●	●●●
EBECRYL 3720-TM40	●●●●	●●●●	●●	●●●●●	●	●●	●●●●●	●●●	●●	●●●●
EBECRYL 3720-TP25	●●●	●●●●	●●●	●●●	●●	●●	●●●●	●●●	●●	●●●

Product Selection Guide

Resins	UV/EB Reactivity	Viscosity	Adhesion	Hardness	Flexibility	Weatherability	Chemical Resistance	Moisture Resistance	Abrasion Resistance	Scratch Resistance
Epoxy Acrylates	5	3	3	4	2	1	5	3	2	3
EBECRYL® 3721	●●●●	●	●●●	●●●●	●●	●●	●●●●	●●●●●	●●●●	●●●
EBECRYL 3730-TP20	●●●	●●●●●	●●●	●●●	●●	●●	●●●	●●●	●●	●●●
EBECRYL 4266	●●●	●●●●	●●●	●●	●●●	●	●●●	●●●	●●●	●●
EBECRYL 5848	●	●●●	●●	●	●●●	●●●●●	●	●●●●	●	●
Aliphatic Urethane Acrylates	3	2	3	4	5	5	2	4	5	5
EBECRYL 210	●	●●	●●●●	●	●●●●●	●●●	●	●●●	●●	●●
EBECRYL 225	●●●●●	●●●	●●	●●●●●	●	●●●	●●●●●	●●●	●●●●	●●●●●
EBECRYL 230	●	●●●	●●●●	●●	●●●●	●●●	●	●●●	●●	●
EBECRYL 231	●	●●●●●	●●●	●	●●●●●	●●●	●	●●	●	●
EBECRYL 242	●●	●●	●●●●	●●	●●●●●	●●●	●●●	●●●	●●●	●●
EBECRYL 248	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●●●	●●●	●●
EBECRYL 264	●●●	●●●	●●	●●●●	●●	●●●	●●●●	●●●	●●●●●	●●●
EBECRYL 265	●●●	●●●	●●●	●●●●	●●	●●	●●●●	●●●	●●●●●	●●●
EBECRYL 270	●●	●●	●●●	●	●●●●●	●●●	●●	●●	●●	●
EBECRYL 284	●●●	●●●	●●●	●●●	●●●	●●●●●	●●●	●●●	●●●	●●
EBECRYL 285	●●●	●●●	●●●	●●●	●●●	●●●●	●●●	●●●	●●●	●●
EBECRYL 286	●●●	●●●	●●●	●●●	●●●	●●●●	●●●	●●●	●●●	●●
EBECRYL 294/25	●●●	●●	●●●	●●●●	●●	●●●	●●●●	●●●	●●●●●	●●
EBECRYL 1271	●●	●●	●●●	●	●●●●●	●●●	●●	●●	●●	●
EBECRYL 1290	●●●●●	●●●	●●	●●●●●	●	●●●	●●●●●	●●●	●●●●	●●●●●
EBECRYL 1291	●●●●●	●●●	●●	●●●●●	●	●●●	●●●●●	●●●	●●●●	●●●●●
EBECRYL 4100	●●●	●●●●	●●●	●●	●●●	●●●	●●	●●●	●●●	●●●
EBECRYL 4155	●●	●●●●	●●●	●●	●●●●	●●●●	●●●	●●●●●	●●	●●
EBECRYL 4201	●●●	●●●●	●●●	●●	●●	●●●	●●●	●●●	●●●●●	●●●
EBECRYL 4220	●●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●
EBECRYL 4265	●●●	●●●●●	●	●●●●	●	●●●	●●●●	●●●	●●●	●●●●
EBECRYL 4491	●	●●●●	●●●	●	●●●●	●●●	●●	●●●	●●●	●
EBECRYL 4513	●●●	●●●	●●●	●	●●●	●●●	●●	●●●	●●●	●●
EBECRYL 4587	●●	●●●●●	●●	●●●	●●	●●●	●●●	●●	●●●	●●●
EBECRYL 4654	●●	●●●●●	●●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
EBECRYL 4666	●●●	●●●	●	●●●●	●●	●●●●	●●●●	●●●	●●●	●●●
EBECRYL 4680	●●●●	●●●	●●	●●●●	●	●●●●●	●●●●	●●●●	●●●	●●●●
EBECRYL 4683	●●	●●●	●●●	●●●	●●	●●●●	●●●	●●●	●●●	●●
EBECRYL 4685	●●●●	●●	●●●	●●●●	●●	●●●●●	●●●●●	●●●●	●●●	●●●●
EBECRYL 4738	●●●	●●●	●●●	●●●	●	●●●	●●●●	●●●	●●●●	●●●
EBECRYL 4740	●●	●●●●	●●●	●●	●●●	●●●	●●●	●●●	●●●	●●
EBECRYL 4833	●●●	●●	●●●●●	●●●	●●●	●●●●●	●●●	●●●	●●●	●●
EBECRYL 4858	●●●	●●●●	●●●	●●●	●●	●●●	●●●●	●●●●	●●●●	●●●●
EBECRYL 4859	●	●●●●	●●	●●●	●●●	●●●	●●●	●●●	●●●	●●
EBECRYL 4883	●●●	●●	●●●	●●	●●●	●●●	●●●	●●●	●●●	●●
EBECRYL 4900	●●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●	●●●●	●●●●	●●	●●●●

Resins	UV/EB Reactivity	Viscosity	Adhesion	Hardness	Flexibility	Weatherability	Chemical Resistance	Moisture Resistance	Abrasion Resistance	Scratch Resistance
Aliphatic Urethane Acrylates	3	2	3	4	5	5	2	4	5	5
EBECRYL® 4950	●●●●	●●●●	●●●●	●●●●	●●●	●●●●	●●●●	●●●	●●	●●●●
EBECRYL 5129	●●●●●	●●●	●●	●●●●●	●●	●●●	●●●●●	●●●	●●●●	●●●●
EBECRYL 8209	●●●●●	●●●●●	●●	●●●●●	●	●●●	●●●●●	●●●	●●●●	●●●●●
EBECRYL 8210	●●●●●	●●●●●	●●	●●●●●	●	●●●	●●●●●	●●●	●●●●	●●●●●
EBECRYL 8301-R	●●●●●	●●●●	●●	●●●●●	●	●●●	●●●●●	●●●	●●●●	●●●●●
EBECRYL 8314	●●●	●●●●	●●●●	●●●	●●●●●	●●●●●	●●●●	●●●●●	●●●●	●●
EBECRYL 8315	●●●	●●●●	●●●●	●●●	●●●●●	●●●●●	●●●●	●●●●	●●●●	●●
EBECRYL 8402	●●●	●●●●	●●●●	●●●	●●●	●●●●●	●●●	●●●	●●●	●●
EBECRYL 8405	●●●	●●●	●●●	●●●	●●●	●●●●●	●●●	●●●	●●●	●●
EBECRYL 8409	●●●	●●●●	●●●●	●●●	●●●	●●●●●	●●●	●●●	●●●	●●
EBECRYL 8411	●●	●●	●●●	●	●●●●●	●●●	●●	●●	●●	●●
EBECRYL 8413	●●●	●●●	●●●●	●	●●●●●	●●●	●●	●●	●●●	●●
EBECRYL 8501	●●●●	●●●	●●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●
EBECRYL 8602	●●●●●	●●●	●●	●●●●●	●	●●●●	●●●●●	●●●	●●●●	●●●●●
EBECRYL 8605	●	●	●●●	●●●●	●●	●●●●●	●●●●	●●●●	●●●●	●●●
EBECRYL 8606	●●●	●●	●●●●	●●●	●●●●	●●●●●	●●●●	●●●●●	●●●	●●
EBECRYL 8702	●●●	●●	●●●	●●●●	●●●	●●●●	●●●●	●●●●	●●●●●	●●●
EBECRYL 8800	●●●●	●	●●●	●●●	●●●	●●●●	●●●	●●●●	●●●	●●
EBECRYL 8800-20R	●●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●	●●
EBECRYL 8804	●●●	●	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●
EBECRYL 8807	●●●●●	●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●	●●
EBECRYL 8809	●●●	●	●●●	●●●	●●●●	●●●●●	●●●	●●●	●●●	●●
EBECRYL 8810	●●●	●	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●
EBECRYL 8812	●●●●	●	●●●	●●●	●●●	●●●●	●●●	●●●●	●●●	●●
EBECRYL 8894	●●●	●●●	●●	●●	●●●	●●●	●●●	●●●●●	●●●	●●●
EBECRYL 8896	●●	●●●	●●	●	●●●●	●●●	●●	●●●	●●●	●●
EBECRYL 220	●●●●●	●●●	●	●●●●●	●	●	●●●●●	●●●●	●●●●	●●●●●
EBECRYL 2221	●●●●	●●●	●●	●●●●	●●	●	●●●●	●●●●	●●●●	●●●●
EBECRYL 4501	●●●●	●●●●	●●●	●●	●●	●●	●●●	●●●	●●●●●	●●●
EBECRYL 4827	●	●●	●●●	●	●●●●●	●●●	●	●●●	●●	●●
EBECRYL 4849	●●	●●●	●●●●	●●	●●●●	●●●●	●●●	●●●	●●●	●●

Product Selection Guide

Resins	UV/EB Reactivity	Viscosity	Adhesion	Hardness	Flexibility	Weatherability	Chemical Resistance	Moisture Resistance	Abrasion Resistance	Scratch Resistance
Isocyanate Functional Urethane Acrylates	2	2	4	3	4	3	3	3	5	4
EBECRYL® 4150	●●	●●●	●●●●	●●	●●●	●●●	●●●	●●●	●●●	●●
EBECRYL 4250	●●●	●●●●	●●●●	●●	●●●	●●●	●●	●●●	●●●	●●●
EBECRYL 4396	●	●●●	●●●●	●●	●●●●	●●●	●●●	●●●	●●●	●●
EBECRYL 4397	●	●●●	●●●●	●●	●●●●●	●●●	●●●	●●●	●●●	●
EBECRYL 4510	●●●●	●●	●●●	●●●●	●	●●●	●●●●	●●●	●●●●	●●
EBECRYL 4765	●●●	●●●●●	●●●	●●●	●●	●●●	●●●●	●●●	●●●	●●
Polyether/Polyester Acrylates & Diluted Polyesters	4	5	3	3	2	3	3	2	3	4
EBECRYL 80	●●●●●	●●●	●●●	●●●●	●	●●	●●●●	●●	●●●●●	●●●
EBECRYL 81	●●●	●●●●●	●●●	●●	●●●	●●	●●	●	●	●
EBECRYL 83	●●●●	●●●●	●●●	●●●	●●	●●	●●●	●●	●●●●	●●
EBECRYL 85	●●●●	●●●●●	●●●	●●●	●●	●●	●●●	●●	●●●	●●
EBECRYL 416	●●●●	●	●●●●●	●●●	●	●●	●●●	●●	●●	●●
EBECRYL 417	●●●●	●●	●●●●	●●●	●	●●	●●●	●●	●●	●●
EBECRYL 418	●●●●	●●	●●●●●	●●●	●	●●	●●●	●●	●●	●●
EBECRYL 441	●●●	●●	●●●●	●●	●●●	●●●	●●●	●●	●●	●●
EBECRYL 444	●●●●	●	●●●●	●●●	●	●●	●●●	●●	●●	●●
EBECRYL 445	●●●●	●●	●●●●	●●●	●	●●	●●●	●●	●●	●●
EBECRYL 450	●●●	●●●	●●●	●●●	●●	●●●	●●●●	●●●	●●●●	●●●
EBECRYL 452	●●●	●●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●
EBECRYL 524	●	●●	●●●●●	●●	●●●	●●	●	●●	●●	●
EBECRYL 546	●●	●●●	●●●●	●●	●●●	●●	●●	●●	●●●	●●
EBECRYL 571	●	●●●	●●●●	●●	●●●	●●	●●	●●	●●●	●●
EBECRYL 657	●●●	●	●●●	●●●	●●	●●	●●●	●●●	●●●	●●
EBECRYL 809	●●	●●●	●●	●●	●●●●●	●●●	●●	●●●	●●●●	●●
EBECRYL 810	●●●	●●●●	●●●	●●●	●●	●●●●	●●●●	●●●●	●●●●	●●●
EBECRYL 811	●●	●●	●●●	●●●	●●	●●●	●●●	●●	●●●	●●
EBECRYL 812	●●●	●●●	●●●	●●●	●●●●	●	●●●●	●●●	●●●●	●●
EBECRYL 820	●●●●	●●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●
EBECRYL 830	●●●	●●	●●	●●●●	●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
EBECRYL 838	●●●	●●	●●	●●●●●	●	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
EBECRYL 846	●●●●	●●	●●	●●●●	●	●●	●●●	●●●●	●●●●●	●●●●
EBECRYL 854	●●●	●●	●●●●	●●	●●●	●●●	●●●	●●●	●●●●	●●●
EBECRYL 856	●●●●	●●●●●	●●●	●●●	●●●	●●	●●●●	●●●●	●●●●	●●●●
EBECRYL 859	●●●●●	●●	●●●	●●●	●●	●●	●●●	●●●	●●●	●●●
EBECRYL 870	●●●●	●●	●●●	●●●	●●	●●	●●●	●●●	●●●	●●
EBECRYL 871	●●●●	●●	●●●	●●●	●●	●●	●●●	●●●	●●●	●●
EBECRYL 875	●●	●●	●●●	●●●	●●	●●●	●●●	●●	●●●	●●
EBECRYL 876	●●●●	●●●	●●●	●●●●	●●	●●	●●●●	●●●	●●●	●●●
EBECRYL 888	●●●●	●●●●	●●●●	●●●	●●●●	●●	●●●●	●●●	●●●●	●●●
EBECRYL 893	●●●	●●●●	●●●	●●●	●●	●●●●	●●●●	●●●●	●●●●	●●●

Resins	UV/EB Reactivity	Viscosity	Adhesion	Hardness	Flexibility	Weatherability	Chemical Resistance	Moisture Resistance	Abrasion Resistance	Scratch Resistance
Polyether/Polyester Acrylates & Diluted Polyesters	4	5	3	3	2	3	3	2	3	4
EBECRYL® 898	●●●	●●●	●●●	●●●	●●	●●●●	●●●●	●●●●	●●●●	●●●
EBECRYL 1871	●●●●	●●	●●●	●●●	●●	●●	●●●	●●●	●●●	●●
EBECRYL 1885	●●●	●●	●●●	●●●	●●●●●	●●●●	●●●	●●●	●●●●●	●●●
EBECRYL 4175	●●	●●	●●●●	●●●	●	●●	●●●	●●●	●●●	●●●
EBECRYL 4381	●●	●●●	●●●●	●●●	●	●●	●●●	●●●	●●●	●●●
EBECRYL 4744	●●	●●●	●●	●●	●●●	●●	●●●	●●	●●●	●●●
EBECRYL 5781	●●●●●	●●●●	●●	●●●●	●●	●●●	●●●●	●●●	●●●	●●●●
EBECRYL 5850	●●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●
Acrylic Acrylate	2	1	4	2	3	4	2	4	2	1
EBECRYL 1200	●●	●●●●	●●●●	●●●	●●	●●●●	●●	●●●	●●●	●●
EBECRYL 1205	●●	●●●●	●●●●	●●	●●●	●●●●	●●	●●●	●●	●●
Polymer/Diluent Blends	2	1	5	2	3	4	2	4	2	1
EBECRYL 303	●●	●●●●●	●●●●●	●●●	●●	●●●●	●●	●●●	●●	●●●
EBECRYL 745	●●●	●●●●	●●●●●	●●●	●●●	●●●●	●●	●●●●	●●●	●●
EBECRYL 1300	●●	●●●●●	●●●●●	●●●	●●	●●●●	●●	●●●	●●	●●●
EBECRYL 1710	●●	●●●●	●●●●	●●●	●●	●●●●	●●	●●●●	●●	●●●●
Diluting Acrylates Monofunctional	2	5	4	1	5	3	2	3	2	1
β-CEA	●●●●●	●	●●●●●	●●●●	●●	●●	●●●●	●●	●●●	●●
IBOA	●●	●●	●●●	●●●●●	●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●

Product Selection Guide

Resins	UV/EB Reactivity	Viscosity	Adhesion	Hardness	Flexibility	Weatherability	Chemical Resistance	Moisture Resistance	Abrasion Resistance	Scratch Resistance
EBECRYL® 110	●●●●	●●●	●●	●●	●●●	●●	●●	●●	●●●	●●●
EBECRYL 113	●●●	●	●●●●	●●	●●●	●●●	●●●	●●●	●●	●●
EBECRYL 114	●●●●	●●●●	●●●●	●●●	●●●	●●	●●●	●●●	●●●	●●●
EBECRYL 117	●●	●●●●	●●●●	●●●	●●●	●●	●●●	●●●	●●●	●●●
Diluting Acrylates Difunctional	2	5	4	1	5	3	2	3	2	1
DPGDA	●●●	●●●	●●●	●●●	●●●	●●●●	●●●●	●●●	●●●	●●●●
HDDA	●●●	●●●●●	●●●●●	●●	●●●●●	●●●●●	●●●	●●●●●	●●●●●	●●●
NPG(PO)2DA	●	●●●	●●●●	●	●●●●●	●●●	●●	●●●	●●●●	●●
TPGDA	●●	●●●	●●●●	●●●	●●●●	●●●	●●●●	●●●●	●●●●	●●●
EBECRYL 130	●●●●	●●	●●●●●	●●●●	●●●	●●●	●●●●	●●●●●	●●●●	●●●●●
EBECRYL 150	●●●●	●	●●	●●●●●	●●	●	●●●●●	●●●●●	●●●	●●●●●
EBECRYL 151	●●●●	●●	●●●●●	●●●●	●●●	●●●	●●●●	●●●●	●●●●	●●●●
Diluting Acrylates Trifunctional & Higher	4	3	2	5	1	3	4	3	3	4
DPHA	●●●●●	●	●	●●●●●	●	●	●●●●●	●●●	●●	●●●●●
OTA-480	●●	●●●	●●●●●	●●	●●●●	●●●●	●●●	●●●●	●●●●	●●
PETIA	●●●●●	●●	●●	●●●●	●	●●	●●●●	●●	●●	●●●●
TMPEOTA	●●●	●●●●●	●●●	●●●	●●●●●	●●●	●●●	●●●	●●●●●	●●●
TMPTA	●●●●	●●●	●●	●●●●	●	●●●●●	●●●●	●●●●●	●●●	●●●●
TMPTMA	●●●	●●●	●●	●●●●	●	●●●●●	●●●●	●●●●●	●●●	●●●●
EBECRYL 40	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●●	●●●●	●●●
EBECRYL 45	●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●●	●●●●	●●●
EBECRYL 50	●●●●	●●●	●●●	●●●	●●●	●●●	●●●●	●●●	●●●●	●●●
EBECRYL 53	●●	●●●	●●●●●	●●	●●●●	●●●●	●●●	●●●●	●●●●	●●
EBECRYL 140	●●●●	●●	●●	●●●●	●	●●●	●●●●	●●●●	●●●	●●●
EBECRYL 853	●●●	●●●●●	●●●	●●●	●●●●	●●●	●●●	●●●	●●●●●	●●●
EBECRYL 895	●●●●●	●	●	●●●●●	●	●	●●●●●	●●●	●●	●●●●●

Resins	UV/EB Reactivity	Viscosity	Adhesion	Hardness	Flexibility	Weatherability	Chemical Resistance	Moisture Resistance	Scratch Resistance
Waterborne UV Resins									
UCECOAT® 2501	●●●	●●●●●	●●●●	●●	●●●	●●●●	●●●	●●●	●●
UCECOAT 2801	●●●	●●●●	●●●●●	●●●	●●●	●●●●	●●	●●●	●●●
UCECOAT 2802	●●	●	●●●●	●●●	●●●●	●●●●●	●●●●	●●●●	●●●
UCECOAT 2803	●●●	●●●●	●●●●	●●●	●●●	●●	●●●●	●●	●●●
UCECOAT 2804	●●●●	●●●●	●●●●	●●●	●●●	●●●	●●●●	●●●	●●●
UCECOAT 2805	●●●	●●●	●●●●	●●●	●●●	●●●	●●●●	●●●	●●●
UCECOAT 2806	●●●●	●●●●●	●●●●	●●●	●●●	●●●	●●●●	●●●	●●●
UCECOAT 6560	●●●	●●●●	●●●●●	●●●	●●●●	●●●	●●●	●●●	●●●
UCECOAT 6570	●●●	●●	●●●●●	●●●	●●●●	●●●	●●●	●●●	●●●
UCECOAT 7230	●●●●●	●●●●	●●●●	●●●●●	●	●●	●●●●●	●●●●●	●●●●●
UCECOAT 7510	●●●	●●●●	●●●●	●●●●	●●	●●●●	●●●●	●●●●	●●●●
UCECOAT 7620	●●●●	●●	●●●●	●●●●●	●●	●●●	●●●●	●●●●●	●●●●
UCECOAT 7630	●●●	●●●	●●●●●	●●●●	●●	●●●	●●●●	●●●●	●●●●
UCECOAT 7655	●●●●●	●●	●●●●	●●●●●	●	●●	●●●●●	●●●●	●●●●●
UCECOAT 7674	●●●	●●●●	●●●●●	●●●	●●●	●●●●	●●	●●●	●●●
UCECOAT 7689	●●	●●●●●	●●●●	●●●	●●●●	●●●●●	●●●●	●●●●	●●●
UCECOAT 7700	●●●●●	●●●●	●●●●	●●●●●	●	●	●●●●●	●●●●●	●●●●●
UCECOAT 7717	●●●	●●●	●●●●	●●●	●●●	●●●●	●●●	●●●	●●●
UCECOAT 7733	●●●●	●	●●●●	●●●●	●	●●	●●●●●	●●●●●	●●●●
UCECOAT 7788	●●●	●●●	●●●●	●●●	●●●	●●	●●●●	●●●	●●●
UCECOAT 7856	●●●●	●●●	●●●●	●●●	●●●	●●	●●●●	●●●●●	●●●
UCECOAT 7891	●●●●●	●●●	●●●●	●●●●●	●	●	●●●●●	●●●●	●●●●●

Key to the Tables

Key Word	Description
Acid Value	Expressed in mg KOH per gram. For some materials, acid value is reported as weight % acrylic acid. Note: acid value x 0.128 = % acrylic acid acid value x 0.1497 = % methacrylic acid
Color	Average values in Gardner, Pt-Co (APHA), or iodine scales. Gardner - range from light yellow to red defined by the chromaticities of glass standards numbered from 1 for the lightest to 18 for the darkest. Pt-Co - defined by specified dilutions of a platinum-cobalt stock solution, ranging from 0 at the light end of the scale to 500 at the darkest. Iodine - ranges from yellow to brown defined by specified dilutions of an iodine solution, ranging from 1 for the lightest color to 500 for the darkest. For colors registering 1 or less on the Iodine scale, the Platinum-Cobalt Units are applicable.
Density	Mass per unit of volume at 25°C, expressed in grams per milliliter.
Elongation	Average elongation (strain) at break expressed as the percent change in the gauge length, measured on the UV cured homopolymer of the product.
Functionality	Theoretical number of acrylate double bonds per molecule.
MFFT	Minimum film formation temperature. The temperature at which a continuous film is formed after the evaporation of volatile materials from a dispersion or emulsion.
Molecular weight	The calculated weight based on the theoretical chemical composition.
Particle size	The mean size of the particles in dispersion, reported in microns.
pH	The measure of the acidity or alkalinity of an aqueous product. Numerically equal to 7 for neutral, pH increases with alkalinity and decreases with acidity over a range of 0-14.
Solids	The amount, expressed in percent, of the non-volatile material remaining from a solution or dispersion when heated at a specified time and temperature.
Tensile Strength	Average stress in pounds per square inch at break, measured on the UV cured homopolymer of the product.
Tg	Glass transition temperature in °C of the UV cured homopolymer of the product as measured by dynamic mechanical analysis (DMA).
Viscosity	Viscosity in centipoise (cP) or poise (P) measured at 25°C and at the sales specification temperature if other than 25°C. cP = mPa•s.
Weight per Amine	Average molecular weight per amine group.
Young's Modulus	Also known as elastic modulus; the force required to elongate a material and calculated from the ratio of stress to strain. It is indicative of the stiffness or rigidity of a material. Measured on the UV cured homopolymer of the product.

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